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ON

AGRICULTURE.

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(16th September, 1919, to 24th September, 1919).

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MINUTES OF EVIDENCE

TAKEN BEFORE

THE ROYAL COMMISSION ON AGRICULTURE.

ELEVENTH DAY.

TUESDAY, 16TH SEPTEMBER, 1919.

PRESENT:

SIR WILLIAM BARCLAY PEAT (*Chairman*).

SIR WILLIAM JAMES ASHLEY.
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MR. R. B. WALKER.

Mr. R. J. THOMPSON, O.B.E., of the Board of Agriculture and Fisheries (Commercial Department), called and examined.

9051. *Chairman*: May I put in the memorandum of evidence-in-chief of Mr Lawrence Weaver, C.B.E., Commercial Secretary of the Board of Agriculture and Fisheries, which has been sent to us, and which I presume you will speak to?—Yes.

Evidence-in-chief handed in by witness.

PRESENT AND FUTURE PRICES OF AGRICULTURAL REQUISITES.

(1) *Fertilisers.*

During the war fertilisers with the exception of sulphate of ammonia more than doubled in price, but the increase would have been much greater if it had not been for the control of prices, and for the direct Government assistance afforded to the industry. In 1917 prices were agreed with the makers, and in 1918–19 they were formally fixed by the Fertiliser Prices Order, 1918, and by the Compound Fertilisers Order. These two Orders regulated the prices to be charged for sulphate of ammonia, superphosphate, and basic slag and compound manures, these being the only manures which were available in any quantity during that period.

Nitrate of soda was used for explosives, and the supply of this fertiliser was consequently much restricted, and such small quantities as were available were very high in price. Potash also was only available in comparatively insignificant quantities, though by purchasing the total output and reselling for agricultural purposes, the Government were able to keep the prices of the home produced potash at a level very much below what was being obtained for potash sold for industrial purposes, viz., £36 13s 4d. per ton, 80 per cent. muriate, as compared with £58–60 for sales in the open market.

During 1918–19 the makers of both sulphate of ammonia and superphosphate received subsidies from the Government which enabled these two fertilisers to be sold at less than the actual cost of production, but these subsidies were discontinued as from the 31st May, 1919, with the result that an increase in price became necessary in order to cover cost of production.

Comparative prices so far as they are available are given in Table I.

It will be seen that the increase up to the spring of 1919, as compared with the pre-war level (1912), was 15 per cent. in the case of sulphate of ammonia, 107 per cent. for superphosphate, 115 per cent. for basic slag, 112 per cent. for nitrate of soda, and 90 per cent. for potash. The prices which it is estimated will rule next spring show a further increase except in the case of nitrate of soda, which will probably be lower, and in the case of potash, in which there is already a marked decline.

A rough estimate of the sum spent in the United Kingdom on the principal fertilisers shows that the farmers' expenditure rose from nearly £5,000,000 in 1912, to nearly £11,000,000 in 1918–19, and will probably still further increase in 1919–20 to £13,800,000. The whole of this increase is not, however, due to rising prices, as the farmer is now making increased use of these fertilisers. The average cost per ton of fertiliser used which was £3 19s. in 1912, increased to £6 18s. 9d. in 1918–19, a rise of 76 per cent., while the figure for 1919–20 is likely to be about £8 14s. 6d. per ton, a rise of 121 per cent. as compared with 1912 This latter increase is due to the higher prices of

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nitrogenous manures, and the increased use of potash. (Details of these calculations are given in Table II.)

The above figures are of course only approximations, but the information at our disposal is sufficiently definite to enable the estimate to be regarded as fairly close.

The probable position in the ensuing season (June, 1920—May, 1921) can hardly be defined, but present indications suggest that owing to increased shipments of nitrate of soda the price of sulphate of ammonia may fall to say £18 per ton. In the case of superphosphate, the shortage in the supply of phosphate rock is not likely to be remedied in 1920, but the price will probably fall owing to cheaper freights. If we estimate the decline at 15 per cent. this would make 30 per cent. superphosphate about £6 12s. per ton. The demand for basic slag is in excess of the supply owing to its relative cheapness compared with superphosphate, and no increase in price is likely.

In the case of nitrate of soda, by the autumn of 1920 large shipments from Chili are likely to be arriving, and the price may fall to (say) £15. A decline in prices is also probable in the case of potash. Any exact estimate is impossible, say, kainit, £5; sylvinite, £6; muriate, £15; sulphate, £17.

Estimating the quantity used on the lines adopted in Table II., fertilisers would show an average cost per ton of £6 17s. in 1920–21, a decline of 22 per cent. as compared with 1919–20; but still be 73 per cent. above 1912.

(2) *Prices of Feeding Stuffs.*

Until towards the end of 1916 the supply of feeding stuffs did not become exceptionally short and the rise in prices was not generally more than 50 per cent. Early in 1918 prices were controlled by the Ministry of Food at the figures then ruling, and these prices remained in force until the spring of 1919, when the Order was revoked. The feeding stuffs which were controlled by this Order were all kinds of oil cake and meal, milling offals, and brewers' grain, but not maize, oats or feeding barley, which were dealt with separately and were subject to more or less direct control by the Wheat Commission. In August, 1919, the prices of oil cakes showed a great tendency to rise owing to the shortage of supplies abroad and tonnage difficulties, and it was decided to introduce a modified form of control by which maximum prices were fixed by voluntary agreement. Under this arrangement dealers and merchants are licensed on condition that they undertake to sell at not more than the agreed prices. This system will in all probability continue in operation until next summer. It only applies at present to oil cakes and meal, but it is proposed to extend it so that milling offals and maize can only be sold by licensed dealers. The price of milling offals is fixed by the Wheat Commission *ex* mill. In the case of maize the Wheat Commission is the only importer and fixes the price at which it shall be sold by importing and distributing merchants. There is now no control over feeding barley. In the case of oats, importers may not sell above certain maximum prices.

A comparison of average prices of feeding stuffs at different dates is attached.

It is hardly possible to estimate the average increase in feeding stuffs as the supply and the purposes for which they are used vary so considerably.

Taking some of the principal feeding stuffs, the position is as follows:—

	Increase in March, 1919, as compared with 1913–14.	Increase in August, 1919, as compared with 1913–14.
Milling offals ...	105 per cent.	145 per cent.
Maize	135 „	155 „
Oats	152 „	250 „
Feeding Barley...	120 „	162 „
Linseed cake ...	151 „	229 „

If we take these as representative of feeding stuffs in general we get an average increase of 133 per cent. in March, 1919, as compared with pre-war level, and a further increase of 55 per cent. since that date, making an average rise of about 188 per cent.

With regard to the future, the Ministry of Food is of opinion that prices of oil cakes will fall in the near future. Linseed cake at the present is selling in large quantities at £24 2s. 6d., as compared with the agreed price of £25. Argentine new crop linseed for forward delivery is much below spot prices. Cotton seed is also falling.

The Wheat Commission have arranged for the importation of maize on a greatly increased scale, practically equal to pre-war, and this will do much to relieve the stringency in feeding stuffs. Against this must be set the poor hay crop.

It is practically impossible to prophesy as to the future course of prices: on present indications prices are not likely to rise further, and everything points to a fall.

(3) *Prices of Farm Seeds.*

Considerable difficulty arises in calculating the increase in the cost of farm seeds owing to the fact that there are numerous varieties of every kind of these seeds, and even when a standard variety of a particular kind of seed is taken, there is no basic market price. Quotations of average prices obtained from several of the leading seed firms, show considerable variation, and it is only possible to arrive at an approximate figure by striking an average of the various prices submitted.

The price of cereal seed is to a large extent governed by the price of the milling or feeding quality of the seed in question, a more or less regular premium over the milling or feeding price being paid for seed intended for sowing. Thus the curve of the prices of cereal seed follows fairly closely that of the feeding qualities. The quality of the harvest is, however, a factor in the variation in price of cereal seeds from year to year, and this will probably be particularly marked in connection with the price of seed oats and seed barley required for next season's sowing. The current harvest of these two cereals has been far from satisfactory, and in the case of barley there will also probably be an increased demand for brewing. It is estimated that the seed oats will cost 11 per cent. more next season than in the 1918-19 season, and that the increase in seed barley will amount to 43 per cent.

The price of root seeds (turnip, mangel and swede) during the past season showed a marked increase over the pre-war averages, amounting to 171 per cent. in the case of turnips, 53 per cent. in mangel and 269 per cent in swede. Most of this seed is home grown, and the increase is due to the extra cost of production (farmers who contract with seed firms to grow root seed are asking considerably higher prices than in pre-war days), bad seasons and enhanced cost of handling, *i.e.*, cleaning, storing and distributing. The high prices obtained for root seeds have, however, caused growers to increase their acreages with the result that, in the case of turnips the price next season will be, it is estimated, reduced by 22 per cent. over last season's figure, whilst mangel and swede will probably show a decline of 9 per cent. and 5 per cent. respectively.

In the case of grass and clover seed, the bulk of which has to be imported, prices rose in 1919 from 100 to 250 per cent. above the pre-war figures. The main reason for this was that supplies were cut off from large producing countries such as Russia, Germany, Austria-Hungary and Belgium, whilst the transport charges from countries which remained open to supply our requirements were enormously increased.

In view of the probable continued shortage in the production of seed in the countries specified, it is estimated that the price of most of the principal grass and clover seeds will show a still further advance next season, but it is as yet too early to give anything but a very approximate estimate as to the probable increase.

Unlike most of the other grass seed, the bulk of which is imported from overseas, rye grass seed is mainly home grown. The price of this seed during the past season has been 253 per cent. over pre-war rates. It is understood that owing to the small crops in 1916 and 1917 the "carry over" of old seed to the

1918-19 season was a negligible quantity. The 1918 crop was a fair one, but the small stock of old seed, the high standard of quality set by the Testing of Seeds Order, the general tendency of merchants to buy their stocks exceptionally early in the season, all contributed to raise the price. It is also claimed that the grower is now more independent than he was in pre-war days and consequently is in a position to bargain for a much higher price. It is considered that the level reached in 1918-19 will be maintained, or in any case only slightly reduced, during the forthcoming season.

(4) *Prices of Agricultural Machinery.*

The attached Table provides a comparison of the estimated cost of implements and tools for a farm of 500 acres (400 acres arable and 100 acres grass), in 1914, and at the present time. This shows that the implements which could be purchased in 1914 for £1,332 would now cost £2,582, a rise of 94 per cent. The rise in the various implements is, of course, not by any means uniform, but, broadly speaking, the cost of agricultural machinery and tools and implements may be said to have doubled.

The price of steam tackle for ploughing has advanced roughly 120 per cent., and the cost of ploughing by contract by about 75 per cent. The prices of tractors have tended to advance a little during the past two years. Comparison with pre-war prices is hardly possible, as the types of tractor now in use are different.

With regard to the trend of future prices it is impossible to prophesy with any certainty. The only chance of a fall in prices would arise from a large importation at low rates from America, but in the present state of exchange this is not probable. The price in this country of the Fordson tractor (£285) approximates to that of the Austin (£300) a British made tractor on rather superior lines.

Binders are subject to a price agreement, which although only fixed for this year, is quite likely to be arranged again next year, the determining factor being the British manufacturing costs, and these are likely to determine prices next year. If the American exchange is corrected fairly rapidly, then it is quite likely that in certain lines it would pay American houses to reduce the selling price here; but competition is much more likely in foreign markets than in the home market. American competition in the United Kingdom has never been very serious except in a few lines, *e.g.*, harvesting machinery, and latterly, tractors; other types of American implements are not in general favour over here, although American ploughs enjoy substantial popularity in certain districts, and are likely to be "pushed" in future; the same remark applies to disc harrows.

TABLE I.

Approximate Spring Prices of Fertilizers per ton. (*See Footnote.*)

Price in March.	Sulphate of Ammonia.	30 per cent. Superphosphate.	30 per cent. (total) Basic Slag.	Nitrate of Soda, 95 per cent.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1912	14 11 3	3 0 0	1 12 6	10 17 0
1913	13 19 3	3 0 0	1 12 6	12 0 0
1914	12 7 6	3 0 0	1 13 6	10 11 8
1915	13 10 6	5 0 0	2 2 6	11 6 3
1916	16 17 6	6 0 0	2 14 0	17 1 8
1917	16 0 0	6 10 0	3 2 6	23 0 0
1918	16 7 6	6 3 0	3 2 6	27 5 0
1919	16 15 0	6 4 6	3 10 0	23 0 0
1920	22 0 0	7 15 0	3 12 0	18 0 0

Percentage of Increase.

	1912–1919.	1912–1920.	1919–1920.
Sulphate of Ammonia	15	51	31
Superphosphate	107	158	24
Basic Slag	115	122	3
Nitrate of Soda	112	66	− 22*

* Decrease.

Potash.

	Kainit, 14 per cent. K_2O.	Potash Salts, 30 per cent. K_2O.	Sulphate of Potash, 90 per cent. K_2SO_4.	Muriate of Potash, 80 per cent. KC_l.
	£ s. d.	£ s. d.	£ s. d	£ s. d.
May, 1913...	3 9 6	6 2 6	11 17 0	10 8 0
August, 1919...	6 7 6	11 17 6	22 10 0	20 0 0
„ 1920...	4 7 6	8 10 0	16 7 6	14 7 6

Percentage of Increase or Decrease.

	1913–1919.	1913–1920.	1919–1920.
Kainit	+ 84	+ 26	− 33
Potash Salts	+ 94	+ 38	− 28
Sulphate of Potash ...	+ 90	+ 38	− 27
Muriate of Potash ...	+ 92	+ 38	− 28

NOTE.—The prices of Sulphate of Ammonia for the years 1912–1916 are for "Good Grey 24 per cent. f.o.b. Hull." The prices for 1917–1920 are for 24½ per cent. quality, and include delivery to farmers.

The prices of both Superphosphate and Basic Slag are f.o.r. at works, except the figures for 1918–19 in the case of Superphosphate and for 1919–1920 in the case of Basic Slag, which are "ex-works" prices. In these years Superphosphate and Basic Slag were sold at delivered prices, but for purposes of comparison the allowance for delivery has been deducted.

The price of Nitrate of Soda is the price in Liverpool. The price of potash does not include delivery.

TABLE II.

Estimate of total expenditure in United Kingdom on the principal kinds of fertilisers (excluding delivery charges).

—	1912.		1918–19.		Total Expenditure.	
	Quantity used.	Average Price.	Quantity used.	Average Price.	1912.	1918–19.
	Tons.	£ s. d.	Tons.	£ s. d.	£	£
Sulphate of Ammonia ...	60,000	14 10 0	250,000	16 0 0	870,000	4,000,000
Superphosphate	700,000	3 0 0	750,000	6 0 0	2,100,000	4,500,000
Basic Slag	300,000	1 12 6	550,000	3 0 0	487,500	1,650,000
Nitrate of Soda	100,000	10 15 0	10,000	25 0 0	1,075,000	250,000
Potash	80,000	5 5 0*	15,000	35 0 0*	420,000	525,000
	1,240,000	—	1,575,000	—	£4,952,000	£10,925,000

This gives an average cost per ton of £3 19s. 0d. in 1912 as compared with £6 18s. 9d. in 1918–19, or an increase of 76 per cent.

A similar calculation for 1919–20 shows an average cost per ton of £8 14s. 6d., an increase of 26 per cent. as compared with 1918–19 and 121 per cent. as against 1912, viz. :—

—	Estimated Quantity used. 1919–20.	Average Price.	Total Expenditure.
	Tons.	£ s. d.	£
Sulphate of Ammonia	200,000	21 10 0	4,300,000
Superphosphate	750,000	7 15 0	5,812,500
Basic Slag	500,000	3 0 0	1,500,000
Nitrate of Soda	60,000	20 0 0	1,200,000
Potash	75,000	13 10 0*	1,012,500
	1,585,000	—	£13,825,000

* The average prices for potash are based on an estimate of the proportions of different grades used.

TABLE III.

Average Prices of Certain Feeding Stuffs in London unless otherwise stated.

—	June, 1913 to May, 1914.	Controlled Price on 31st March, 1919.	Controlled Price, September, 1919.	Percentage of Increase in Price.		
				March, 1919, as compared with 1913–14.	September, 1919, as compared with 1913–14.	September, 1919, as compared with March, 1919.
	£ s. d.	£ s. d.	£ s. d.			
Bran ... ... per ton	4 16 0					
Broad Bran ... ... „	5 2 5	11 0 0	12 10 0	122	152	13
Pollards ... ... „	5 0 1					
Middlings ... ... „	6 6 6	12 0 0	14 10 0	89	129	21
Rice Meal ... ... „	4 8 11	16 10 0	20 0 0*	267	344	21
Maize Meal ... ... „	7 0 5	19 0 0*	19 12 6	171	179	3
Maize, Argentine, per 480 lbs.	1 5 6†	3 0 0	3 5 0	135	155	8
Oats — English per 336 lbs.	1 0 0	2 10 6	3 10 0* (New Crop)	152	250	40
Oats — Canadian per 320 lbs.	0 18 8	2 19 0	3 1 0	217	227	3
Barley Feed — English per 448 lbs.	1 10 6†	3 7 0	4 0 0*	120	162	19
Barley Feed — Canadian per 400 lbs.	1 4 6†	3 5 0*	3 9 0*	165	182	6
Dried Ale Grains (bags included) per ton	5 9 6	15 10 0	16 15 0*	183	199	6
Malt Culms (bags included) „	5 13 0	14 10 0	15 12 6*	156	176	8
Linseed Cake (London-made) „	7 11 9	19 0 0	25 0 0	151	229	32
Egyptian Cottonseed Cake ... „	5 8 0	15 0 0	19 15 0	178	266	32
Palm Kernel Cake (at Liverpool) „	6 4 0§	13 15 0	17 0 0	122	174	24
Soya Bean Cake (at Hull) ... „	7 4 7	19 0 0	25 0 0	163	246	32
Ground Nut Cake, undecorticated „	10 0 9‡	17 5 0	21 0 0	72	109	20
Feeding Molasses per ton in casks ...	6 10 0	9 0 0*	11 0 0*	38	69	22

* Free of Control.

† July, 1914.

§ January to May, 1915.

‡ 1915–16.

TABLE IV.

Wholesale Price of Farm Seeds.

Kind of Seed.	Unit of weight.	Average price, 1910–1914.	Average price, 1919.	Increase % of 1919 over 1910-1914	Estimated average price in 1920.	Estimated increase or decrease % in 1920 over 1919.
		s. d.	*s. d.*	*Per cent.*	*s. d.*	*Per cent.*
Wheat	qr.	36 3	89 0	+ 145	99 0	+ 11
Barley	„	32 9	77 6	+ 136	110 0	+ 43
Oats	„	22 8	68 0	+ 200	75 6	+ 11
Rye	„	31 5	82 0	+ 161	90 6	+ 10
Tares or Vetches	bush.	—	34 0	—	34 0	—
Turnips (Field)	„	25 10	70 0	+ 171	55 0	− 22
Cabbage („)	lb.	2 4	6 0	+ 158	6 6	+ 8
Swede	bush.	29 1	110 0	+ 269	105 0	− 5
Rape	„	9 7	33 0	+ 244	—	—
Mangel	cwt.	71 11	110 0	+ 53	100 0	− 9
Ryegrass	„	18 5	65 0	+ 253	53 8	− 9
Meadow Fescue	„	80 9	185 0	+ 129	230 0	+ 24
Cocksfoot	„	66 9	156 10	+ 135	135 0	− 14
Crested Dogstail	„	78 2	102 6	+ 31	—	—
Timothy...	„	46 0	79 5	+ 73	80 0	+ 8
Red Clover	„	78 5	277 6	+ 253	270 0	− 9
Alsike	„	85 2	186 3	+ 119	240 0	+ 29
White Clover	„	127 9	262 6	+ 105	290 0	+ 10
Crimson „	„	35 5	90 0	+ 154	55 0	− 40
Trefoil	„	53 3	153 0	+ 187	120 0	− 12
Lucerne...	„	75 0	150 0	+ 100	165 0	− 8
Sainfoin...	qr.	27 10	48 6	+ 78	—	—
Peas	cwt.	71 7	140 0	+ 96	196 0	+ 40
Beans	„	58 1	168 0	+ 186	168 0	Nil
Carrot	lb.	3 6	7 0	+ 100	4 0	− 43

TABLE V.

List of Implements for a farm containing 400 acres arable and 100 acres of Pasture and Meadow, as detailed in Agricultural Encyclopædia, giving 1914 and present-day values.

TILLAGE IMPLEMENTS.	1914.	Present day.
	£ *s. d.*	£ *s. d.*
6 Ploughs (Howard)...	24 4 0	46 6 0
2 sets of Heavy Harrows	6 4 0	12 17 0
3 sets of Seed Harrows	8 0 6	12 19 6
2 sets of chain medium weight Harrows	—	9 9 0
1 Spring tooth or other good Martin Mark 2 Cutter	12 0 0	19 10 0
1 Ring Roller, four-cylinder 20 in.	10 0 0	15 10 0
1 4-horse Plain Roller, four-cylinder 20 in.	10 10 0	16 15 0
1 2-horse Roller	8 0 0	12 10 0
1 Light Wood Roller...	3 10 0	5 10 0
1 Potato and double-mould Board Plough	5 17 6	11 0 0
Sowing and Hoeing Implements.		
1 Corn Drill	22 0 0	42 0 0
1 Root Drill, fitted for sowing Superphosphate dry	22 0 0	42 0 0
1 Broadcast Sowing Machine ...	4 5 0	7 10 0
2 Grass Seed Harrows	6 0 0	9 10 0
2 Horse Hoes	6 0 0	13 16 0
2 Single Horse Scufflers	3 15 0	5 10 0
Securing Crops.		
2 Self-binders or Harvesters ...	55 0 0	141 0 0
2 Grass Cutters	21 10 0	52 0 0
2 Horse Rakes	22 10 0	37 0 0
6 Wagons	180 0 0	282 0 0
6 Carts	72 0 0	156 0 0
2 Water Carts...	30 0 0	65 5 0

Preparing Crops for Market.	1914.	Present day.
	£ *s. d.*	£ *s. d.*
1 Threshing Machine	189 10 0	275 0 0
1 8-horse power Portable Engine	240 0 0	435 0 0
1 Elevator or Stacker	40 0 0	94 12 0
2 Winnowing Machines ...	30 15 0	64 5 0
1 Barley Screen	10 10 0	23 12 0
1 Weighing Machine and Weights	2 10 0	4 15 0
50 Sacks	2 10 0	7 10 0
Live Stock.		
2 Sheep Turnip Cutters	9 0 0	20 0 0
1 Pentall Pulper	3 10 0	7 12 0
1 power Chaff Cutter	30 10 0	52 0 0
1 power Oil-cake Breaker ...	9 18 6	22 0 0
1 power Grist Mill	12 18 0	20 17 6
Dairy Utensils	50 0 0	110 0 0
Harness	48 0 0	144 0 0
Sheep Troughs and Hurdles (wood)	30 0 0	90 0 0
Shepherd House on wheels ...	30 0 0	65 0 0
Tools. Including spades, shovels, forks, scythes, prongs, crowbars, barn shovels, bushel measures, ropes, cow chains, head stalls, sieves besoms, brushes, combs, buckets' rakes, hay knives, muck' scrapers, hoes, pickaxe, mattock, barrows, sack barrows, ladders, bull stick, drenching horn, etc.	56 0 0	130 0 0
	1,332 15 6	2,582 1 6

[*This concludes the evidence-in-chief.*]

9052. *Dr. Douglas*: We are to take it, are we, that you adopt this evidence-in-chief?—Yes. It is subject to a few amendments which I may make in the course of my evidence.

9053. Would you like to indicate these now for our guidance?—I think I prefer to take them as I go along, if you do not mind?

9053A. There are one or two questions that I wish to put to you on the supply of fertilisers. Do you anticipate there will be a shortage of any of these for next spring—not, I suppose, nitrogenous manures; but of others, do you expect a shortage?—The supply of sulphate of ammonia is likely to be quite sufficient, and also of nitrate of soda; but in the case of

superphosphate, the importers are experiencing very great difficulty in obtaining the phosphate rock they require from North Africa and North America. But on the whole, I anticipate that they will get approximately the same quantity as they got last year, which was fully up to the average.

9054. Is it within your knowledge that some manufacturers of superphosphate have already been compelled to shut down their works?—Yes. We know that the manufacturers have been experiencing great difficulty. The position is, that the Fertiliser Manufacturers' Association is making contracts for the purphase of phosphate rock on behalf of the whole of the makers in this country, and they have made contracts for a quantity which will provide them with supplies equal to last year. At the same time the freight difficulty is such, that the material is not being delivered as rapidly or as evenly as is desirable. It is difficult to get ships to go to particular ports just at the time when they are required. But looking at the thing from a broad point of view, we hope—it is a hope—but we do hope, that the quantity will be equal to last year.

9055. But is not that a very sanguine view, if it is the case that some works have already closed down?—I think it is necessary to remember that it is not in any way abnormal for works to be closed down in the summer. It was always the custom in the trade for them to close for a couple of months in the height of the summer for cleaning and repairing their plant. They were not in the habit of going on full output at this time of the year.

9056. But is it not the case that this is the very time of the year when activity is resumed in the manufacture of phosphates?—Yes.

9057. And that the stocks in hand are not abnormally high, to put it no stronger than that?—No, the stocks in hand are inclined to be low.

9058. And manufacture is stopping in certain cases?—Yes; there are several cases I know, but I am in constant communication with the Fertiliser Manufacturers' Association on this subject, and I do not think the number is very serious; but they do exist.

9059. Does not that point to a considerable shortage next spring?—Not altogether, because we hope and believe that it will be made up.

9060. Then the memorandum that you submitted indicates that that will react on the price of basic slag?—Yes.

9061. And will the price of superphosphate not also rise?—The price of superphosphate is likely to rise. The figure I mentioned in my memorandum was £7 15s.

9062. In fixing that figure, had you taken into account the probability of a scarcity?—No. That is a figure which is in the nature of an agreed price fixed by the Fertiliser Manufacturers' Association.

9063. But if there should be a shortage, will that agreement stand?—I think so.

9064. Will the sale price not rise?—Not in the case of this material.

9065. Let me put it to you: has any kind of security been taken that the price will not rise in the spring of 1920?—No; it was impossible to do that. In the case of sulphate of ammonia and basic slag, the Board have taken steps to prevent the price rising. They have fixed a price for the season by agreement. But in the case of superphosphate, owing to the uncertainty of freight and the freight charges, they were unable to do that with the manufacturers. I may say for your information, that only yesterday I saw the Shipping Controller with the representative of the Fertiliser Manufacturers' Association with a view to inducing the Controller to assist the Association, in regard to freight from North America. The result of the conference was, that the Shipping Controller was of opinion that it would be necessary to offer higher freights from North America in order to get phosphate rock brought here from Florida; and I am afraid the result of that must inevitably be to raise that price of £7 15s. by at any rate 5s. per ton, and possibly a little more.

9066. So that your £7 15s. figure is really too low?—Yes; in the light of what transpired yesterday, I am afraid it is.

9067. Then in the case of a shortage of superphosphate, you would recognise that that would interfere seriously with the production of certain crops, that is to say, it would increase the cost per quarter if superphosphate could not be obtained at that price?—Yes.

9068. So that there is a possibility, or would you say a probability, of an increased price?—Above £7 15s.?

9069. Yes?—Yes.

9070. And there is also some likelihood of a shortage which would interfere with production?—I hesitate to agree to the statement that there is likely to be a shortage. Of course it is impossible to foretell that; but we have every hope that the total quantity will be equal to last year. We may be disappointed, I quite agree.

9071. I think you said to me that present stocks are low, and that manufacture is rather ceasing or slowing down at the very period when it ought to be resuming its activity for the spring production?—Yes; but there is a good deal of phosphate rock on the way to this country.

9072. So that you will agree there is some cause for anxiety?—Yes, quite.

9073. Then with regard to nitrate of soda, you do not anticipate any shortage?—In the case of nitrate of soda, the Ministry of Munitions are selling at the present time their very considerable stocks of nitrate of soda.

9074. Are there large stocks in this country?—There are quite substantial stocks in this country, and they are being handed over to the trade at the present moment; we are anticipating that the final contract for sale will be made in the course of a day or two, in addition to which nitrate of soda is being imported to some extent from Chili.

9075. Now, with regard to foodstuffs. Have you got any view as to the likelihood of a full supply of, say, linseed cake and cotton cake?—The prospects of a supply of oil cake as a whole are very much better than they were; that is to say, that if we take the pre-war requirements at about 1,200,000 tons of oil cake, we think that the supply for this season will very nearly reach that figure, say, 1,100,000 tons. But that is oil cake as a whole, including compound mixtures. In the case of linseed, the prospects have very much improved of late, and there does seem to be a probability of a fairly good supply. Cotton seed is not by any means so satisfactory.

9076. How does the stock and the visible supply of linseed compare with those of previous years?—Of linseed cake?

9077. Linseed cake, or of the materials for making linseed cake?—As to the stocks, I should say there is very little linseed cake in this country that is not sold. You could not of course purchase linseed cake easily at the present time.

9078. Is it possible to contract for linseed cake for forward delivery just now?—Undoubtedly linseed cake is still being produced, and produced in larger quantities than at any other time during the year; but of course the demand is exceptionally keen.

9079. Are sellers offering it for forward delivery?—It is being offered at the mills for forward delivery.

9080. And for present delivery?—Very little for present delivery. I should say there is not much "spot."

9081. But for future delivery?—For future delivery undoubtedly.

9082. You are aware that was not possible a month or two ago?—Yes; but the position as regards linseed has improved enormously during the past month, and if I may refer to the prices, it is indicated by the fact that the wholesale price has fallen now to about £24 2s. 6d.

9083. Ex mill?—Ex mill.

9084. So that it is nearly £1 below the agreed price?—Yes; but the £24 2s. 6d. is only a price that would apply to considerable quantities.

9085. Then your memorandum points to a very considerable increase in the cost of farm seeds generally for next spring, especially grass seeds. Is that not so?—Yes, that is so.

9086. That applies equally to the imported grass seeds, does it not?—It is due to the shortage of clovers mainly which are imported largely from abroad, and to the high price of rye grass seed in this country.

9087. I was going to ask, is rye grass seed not now selling at very high prices?—Very high indeed.

9088. Much in advance of last spring's prices?—There is very little of the new crop coming on to the market yet.

9089. It is being sold now?—It is in advance of last year, I think.

9090. So that there will be a very considerable increase in the cost of hay production next year in the way of seeds?—My figures in Table IV., in the case of rye grass, show a very considerable increase up to last year, but the estimate is that for the current year there will be a fall. It is a small fall. I may say these figures have been obtained from very reliable seed firms.

9091. Is it not the case that the new crop is already selling at a price above that which you estimate? This estimate was made before the new crop came on the market. Since then, has not some of it been sold at an advance on that price?—I think that is very likely.

9092. *Mr. Rae*: What is your opinion of the future of sulphate of ammonia prices? Do you think they are likely to fall or to rise?—The price of sulphate of ammonia up to 31st May next has been agreed by the Board with the makers of sulphate of ammonia, and shows an increase as compared with last year of a very substantial amount.

9093. That is practically a fixed price. I saw that. But suppose a large amount of nitrate of soda came into the market, would not that have a tendency to cause sulphate of ammonia to fall below those fixed prices, do you think?—Yes, undoubtedly it would.

9094. Or is the demand sufficient to keep them up in case there is an increase of nitrate?—The position in regard to sulphate of ammonia has changed so very remarkably. Before the war the quantity of sulphate of ammonia used for agricultural purposes was about 60,000 tons per annum. Last year the quantity used was 250,000 tons, or 260,000 tons. Of course that was owing to the absence of nitrate of soda; but whether the farmers, who have now got accustomed to sulphate of ammonia, will go back to nitrate of soda is not certain.

9095. I suppose the increase in sulphate of ammonia would more than counterbalance the decrease in nitrate of soda?—That is so.

9096. There has been a larger quantity?—Yes. We estimate the quantity of nitrate of soda used before the war at about 100,000 tons, which with 60,000 tons of sulphate of ammonia makes 160,000 tons, as compared with this figure of 250,000, or 260,000, that I have just mentioned, tons of sulphate of ammonia; so that there has been a larger use of nitrogenous manures during the past few years than there was before the war.

9097. Naturally caused by the increased growth of cereals? Yes.

9098. Do you estimate that the total supply of nitrogenous manures will be sufficient for the demands this year?—Yes, I think there can hardly be any doubt on that subject, taking the demand at some figure approximate to what it was last year.

9099. Then what is the position with regard to slag? Basic slag is a material that it is not really possible to increase to any extent. During the war great efforts were made to grind extra quantities, and the total rose to about 550,000 tons last year; but since the close of the last fertiliser season, several works have been closed down owing to a fire in one place, and to an entire alteration of the works in another—very large producers. So that I do not estimate the output this season at more than 500,000 tons as compared with 550,000 last year.

9100. Was not the output of high grade slag interfered with by munitions, or something of that sort? Yes. The proportion of high grade slag produced now is very much less than it was before the war.

9101. Would there not be a return of production of high grade now?—There is no prospect of any return at the moment; in fact the tendency, manufacturers tell me, is quite the other way. They are grinding really lower grades.

9102. Getting a bigger extent of steel, or something?—Yes. It is due to one of the methods of obtaining the steel.

9103. It pays the manufacturers better to produce a lower grade; is that it?—Yes. They do not produce the basic slag expressly; it is truly a by-product. There is a demand for a certain type of steel which is made from a certain kind of ore which produces a slag. They do not do very much to control that part of it.

9104. Then I suppose that is rather guided by the machinery adopted? Have they altered their machinery during the war to lower the grade of slag?—I believe there have been alterations in the process in the steel furnaces which tend to give a lower grade of slag; but I am not an expert on this subject.

9105. You mean we cannot look to an increased supply; is that your opinion?—I think that is quite certain.

9106. I think you said the supply of linseed was short and was likely to be short. Do you know what the prospects are for soya, and cakes of that description?—Soya is so much affected by the very long voyage. It all comes from Vladivostock and Manchuria; and at the present time the freight is very much against it. In addition, ships even at a high freight, do not care about going such a long voyage; so that I do not anticipate there will be any imports of soya beans comparable with the large imports that took place before the war, or in the early days of the war.

9107. Then that points to an increased cost in the production of farmyard manure—the shortage and dearness of feeding stuffs?—Yes. The aggregate quantity of feeding stuffs of all kinds will undoubtedly be less than it was before the war, taking a pre-war level.

9108. And, in your opinion, there is no chance of prices falling in the more or less immediate future?—I think there is a good chance of prices falling from the level they are at now, that is the level which was agreed by the Ministry of Food in August last. I think there is every indication that prices will fall from that level during the next two or three months.

9109. Not to a sufficient extent to relieve the position for this season; I mean to say for the manufacture of farmyard manure for next spring crops?—No. Probably the fall will not be so great. It will only affect costs; it will not affect the total quantity used in any way.

9110. Then with regard to grass and clover seeds, do you think they will be dearer for next season? I do not see any reason why they should be dearer, and, on the other hand, I cannot see any reason why they should fall. The supply is still likely to be short. Rye grass, of course, has risen to a most extraordinary extent; but I am informed that before the war it was at an unremunerative level, and that about 18s. 6d., which I think the figure was, was quite an unfair price.

9111. Of course prices prevailing now are not likely to fall by next spring when the seed will be wanted for use?—No. The rye grass crop, is, I believe, a good average crop, but it is not so abundant as to be likely to affect prices materially.

9112. Do you know anything about the production of wild white clover seed?—Not directly. I have read about it.

9113. I mean, how the supply of next spring is likely to be?—The quantity of wild white clover is increasing rapidly, owing to the very remunerative prices that are being obtained.

9114. Increasing?—Yes; that is, more people have sown white clover and saved the seed.

9115. Of course, it is very much dependent on the weather. For instance, last year there was a lot grown, but very little of the seed was usable. Do you think it will be better in that respect this year?—I am afraid that is a point on which I have not got much information; but I see here a seed firm gives the

price of wild white clover at 21s. for last season 1918-19, and at 20s. for this coming season, which indicates that they expect the price to be somewhere about the same.

9116. Anyhow it will not be dearer?—No.

9117. *Mr. Anker Simmons*: I am rather struck by the prices you quote for basic slag. Is that correct? You have £3 12s. a ton for 1919, and you estimate at £3 a ton for 1920. I am quoting from Table II. You see in Table I. you put the price at £3 12s., but in your estimate in Table II. you put it at £3? I am afraid that that must be an error.

9118. But even £3 12s. strikes me as being rather below the market price?—In the case of basic slag there is an agreed price which has been fixed by the Board, and that is the figure for 30 per cent., 84s. per ton delivered to farmer's station.

9119. That is what I recollect as being the price that is being paid? The explanation is that this price of £3 12s. 0d. is not the delivered price, but is ex-works price; because at the beginning of the table we were only able to give f.o.r. prices for 1912. Therefore, in order to make the comparison fairly correct throughout, a deduction was made for the cost of delivery. The 84s. per ton which is the price, includes 12s. 6d. per ton for delivery.

9120. Then with regard to the other prices, are they delivered prices, or ex-works prices? For instance, sulphate of ammonia £21 10s. 0d., and superphosphate £7 15s. 0d., and so on? The sulphate of ammonia prices you will see from the note for a certain period were f.o.b. prices at Hull. We take it that included a certain amount for delivery, and they consequently may be compared with the later prices which include delivery. But in the case of the superphosphate and basic slag, we were only able to give f.o.r. prices.

9121. Then the £3 should be altered to £3 12s. 0d.?—Yes, I think that ought be altered to £3 12s. 0d.

9122. *Mr. Ashby*: Does it not allow for two grades of slag? In Table I., you are dealing with one, and I imagine in Table II., with another?—Yes, I think that is quite correct. I have forgotten the exact way in which this Table was made up.

9123. You are taking one grade in one case, and an average price in the other?—Yes, that is the explanation. I am much obliged to you.

9124. *Mr. Anker Simmons*: To put it in a sentence, it means you estimate it will cost the farmers in 1920 £3,000,000 more for fertilisers than they had to expend in 1918-19, and something like £9,000,000 more than pre-war? That is so. Of course you will observe that this is partly accounted for by the fact that there is an additional quantity of potash, and that the sulphate of ammonia has gone up in price in the year.

9125. Of course these figures both as they refer to fertilisers and seeds or agricultural machinery, are very instructive to us for the moment. You have already been asked what your opinion was with regard to the future price of seeds. Have you any information which would enable you to form any judgment as to how long these high prices for fertilisers and for agricultural machinery are likely to continue?—In the course of the memorandum I have endeavoured in one or two cases to look forward to the position beyond next spring. Of course you will appreciate one can only make a guess at it; but many of these materials are dependent on freight, and the freight position is undoubtedly becoming easier.

9126. But with regard to prices, would not you say that labour would have a very much greater effect upon the future price of, at any rate, agricultural machinery than freight?—On agricultural machinery, quite.

9127. And seeds?—Yes. I think the only thing that the freight position influences in the case of seeds, is the clover seed which is imported from abroad. It is not freight in that case. It is the difficulty of obtaining our supplies.

9128. I do not quite follow why you estimate a drop of 22 per cent. in the price of turnip seeds and of 5 per cent. in the price of swedes, and of 5 per cent. on the price of mangels. One would have thought that inasmuch as the season is a bad one for all kinds of roots—I should say there are hundreds of acres ploughed up, more than in almost any other crop—the price would be rather more equal than you have it as between those three kinds?—The prices of seeds are much more difficult than of any other article, these figures are based on the replies we have received from a number of merchants, and they are averages. To that extent I think they are valuable. The trade does seem to be of opinion that there will be a difference between mangels, swedes and turnips. I have a letter here from Mr. Mein, who is the President of the Seed Trade Association, who estimates that mangels are likely to decline by 9 per cent., swedes by 8 per cent., and turnips by 8 per cent.

9129. As against 22 per cent.? Yes. These figures are the average of a number of opinions; but you will observe that they move in the same direction.

9130. You are not able to give us, are you, what the percentage of labour would be in the cost of any article of machinery taking them generally. Take harrows, drills, sowers, and so on; what percentage of the cost of production would apply to labour?—I do not feel that I can make a statement on that. As regards machinery, the general impression in the trade is that no great change may be expected for some considerable time. That is the general view.

9131. Of course, you can see it will be necessary for us to form some judgment as to what the next five, six, seven, or possibly eight years will produce, and we could not very well base calculations upon the present prices. What I am driving at is, to ascertain if you have formed an opinion yourself from your knowledge of the question, what the ultimate increase on pre-war prices is likely to be with regard to agricultural machinery?—I am not a prophet.

9132. *Mr. Cautley*: I have only one or two questions, and one or two general ones to begin with. Are the prices that you have given in Tables I, III, and IV all obtained from manufacturers, or how?—Broadly speaking, they are the statements of manufacturers.

9133. Are those manufacturers selected by the Board?—We have taken them as fairly reliable.

9134. I want to know exactly on what you base these figures?—May I take the articles individually?

9135. No, I did not want that; I wanted them generally?—Then that is the reply, I think: that they are the most reliable statements we could get for the earlier period, and for the later dates we have the information of the control price, or something equivalent to it.

9136. I am more concerned with the present prices?—In the case of the present prices, they are the controlled price, or such prices as we may have special opportunities of obtaining information in regard to.

9137. So far as prices are controlled, I can understand that: that is an arrangement fixed by the various controllers. But so far as they are not controlled prices, on what principle have you gone?—It applies mainly to seeds.

9138. And machinery?—Yes. As I explained in the case of seeds, we have only taken the replies we have received from a number of reliable seed houses.

9139. Stopping for the moment at seeds, have you averaged those prices, or have you selected one manufacturer?—No, these are average prices.

9140. Average prices from a number of firms you have selected?—Yes, that is so.

9141. Then as to machinery?—In the case of machinery, the prices are based on trade catalogues.

9142. Is that after allowing for any discounts? Are they the prices to the purchaser?—Yes, these are the estimated prices a farmer would have to pay.

9143. But on what basis have you estimated them; that is what I want to know?—The prices for 1914 and for 1919 were taken from the catalogues at the Royal Agricultural Show.

9144. They are catalogue prices; they are not from actual trade lists in September?—No. I might say these prices were not got out by myself personally.

They were got out by our Agricultural Machinery Branch, and supplied as being fairly representative.

9145. Yes, you tell us they are representative, but I want to test and see how far they are representative. I gather you cannot tell me anything about them?—I cannot tell you anything more than that they are taken from trade catalogues.

9145A. Take Table I., your fertilisers. You have already been asked about the basic slag, and it has been pointed out, and you have agreed, as I understand, that the prices fixed for basic slag are wholesale prices ex mill. They are not the prices a farmer has to pay; he cannot buy at these prices at all?—Yes. The prices which have been fixed by the Board for basic slag are prices to the farmer.

9146. That is not the question I am asking; I am asking about what you put down in your list?—I have put down in my list £3 12s. for 1920, and £3 10s. for 1919. That figure is the price for 30 per cent. basic slag delivered to the farmer, less the allowance which is included in the price for the cost of delivery.

9147. You have already said that. What I want to ask you is, does the same principle apply to the sulphate of ammonia, to the superphosphate, and to the nitrate of soda prices?—No; they are not uniform. They are uniform as regards each article taken separately as a comparison with the earlier years.

9148. The Chairman calls my attention to the note on basic slag at the bottom of Table I., where you say: "The prices of both superphosphate and basic slag are f.o.r. at works, except the figures for 1918–1919 in the case of superphosphate, and for 1919–1920 in the case of basic slag, which are 'ex works' prices." You see, unless we have the prices on one basis it is very difficult to apply your table?—You will understand that in 1912–13 there were no such things as delivered prices, and consequently it is very difficult to give a figure which is comparable all the way down the table.

9149. As I cannot reduce it to one principle, I will ask you a specific question. What was the price that a farmer had to pay in 1919, according to you, for sulphate of ammonia; because I could not buy it at £16 15s.?—In the spring of 1919, from the 1st March to the 1st May, 1919, the price of sulphate of ammonia delivered to farmers was £16 15s. That is for two-ton lots.

9150. And that applied all over England?—That applied all over Great Britain.

9151. What was it in the autumn of 1919, that is now?—The price fixed at the present time for delivery in October, 1919, is £20 10s.

9152. That is to the farmer?—That is to the farmer, in bags, net cash.

9153. Why did they put down here just the price in the spring and not the price in the autumn?—We are very much limited in these prices by the available records.

9154. But these are controlled prices?—Yes; but our endeavour has been to make these prices fairly comparable with 1912 and 1913.

9155. The difficulty I have is, that I do not see what asistance to us the price in the spring of 1919 is when it has risen to £20 in the autumn of 1919?—Sulphate of ammonia on the whole is a spring fertiliser.

9156. Let us take superphosphate. What was the price to the farmer in 1919? Is it £6 4s. 6d.?—Yes, £6 14s. 6d. delivered, and £6 4s. 6d. knocking 10s. off for delivery.

9157. That is in the spring of 1919?—That is in the month of March, 1919.

9158. And the price at the present moment?—It is £7 5s.; but there is no controlled price in the case of superphosphate, so that that is a manufacturer's statement.

9159. I think you have told us that basic slag is 84s. now?—Yes; 84s. delivered, that particular grade.

9160. And nitrate of soda now delivered?—The price of nitrate of soda which is being quoted by the Ministry of Munitions for appreciable quantities, say of 10 to 50 tons, is £20 2s. 6d.

9161. Farmers do not buy it like that, you see?—Then I should say from £21 to £22.

9162. That is the price that an ordinary farmer can buy it at in a two-ton lot?—Yes.

9163. I cannot buy at these prices that you put down here?—These prices, as I have mentioned before, are the regulated prices. I am sorry to hear that you cannot buy at those prices.

9164. I will not say all of them. The price of sulphate of ammonia is all right; at any rate, it is £21 or £22 now?—That is my opinion of what the price of nitrate ought to be; and, as I say, very large sales are being made, and I hope that that will reduce the price to about that figure.

9165. Only one question as to the future of sulphate of ammonia. You anticipate it going down. Is that due to the fact that the other fertilisers, you think, will go down, and therefore sulphate of ammonia will have to go down; or do you anticipate any cheapening in the cost of making sulphate of ammonia?—No. This suggestion that I have made, that the price of sulphate of ammonia will fall after the coming season, is based entirely on the prospect of obtaining supplies of nitrate of soda.

9166. You anticipate that nitrate of soda will be obtainable at so much less, that it will compete with sulphate of ammonia, and sulphate of ammonia prices will come down?—Yes. I expect the freight of nitrate of soda to fall in the future; and that ought to bring prices down, I should say, to between £15 and £17.

9167. But if you are wrong in that, would not you agree with me that the cost of sulphate of ammonia is likely to go up rather than go down, I mean the cost of manufacturing it?—Yes. In these prices we have allowed for a considerable increase in the cost of manufacture; and the makers are reluctant, strange though it may sound, to increase the price further for fear of driving customers away.

9168. In sulphate of ammonia?—Yes.

9169. Just look at Table III., Feeding Stuffs. Am I right in saying that the whole of these feeding stuffs set out in your table are at the present moment controlled? It is under the column "Controlled price, September, 1919."?—No; there are one or two marked with a cross which are not controlled.

9170. I had not observed that. When was this control put on? I will ask you the general question again. Are these the controlled prices to the farmer, or are they controlled prices ex mill? In other words, has carriage to be added to them all?—Yes, carriage has to be added to them all. They are "ex mill" prices.

9171. For instance, take maize. You put maize at a controlled price of 65s. You do not suggest that any farmer can buy maize at 65s. to-day, do you?—That is the authorised price at which maize is sold c.i.f. by the Wheat Commission.

9172. By the Wheat Commission in bulk?—Through their distributing merchants.

9173. In bulk to the distributing merchants. Is it the imported price? Is it the price ex ship to the merchants?—No; this is the price at which the distibuting merchant ought to sell this material.

9174. Ought to sell it; but is he bound to sell it at this price?—The actual licensed distributing merchant is bound to sell at this price, plus handling and delivery charges.

9175. As I understand, there is no controlled price except by means of licensing the dealers. Is that not so? Do you mind explaining what the control of cereals is so far as the Wheat Commission is concerned?—The whole of the maize that comes to this country is imported by the Wheat Commission, and issued by them to licensed distributing dealers.

9176. Am I right in saying that nobody but a licensed distributing dealer can get any maize?—Yes, in the first instance.

9177. Will you tell me the terms of the licence so far as price is concerned at which he has to sell?—No, I do not think I can.

9178. You cannot tell me?—As I understand, he gets a very small profit of about 1s. 3d. a quarter.

9179. Is he supplied at 65s.?—What I want to get at is what is the price of 65s.?—The 65s. is the price at which the distributing dealer sells, I believe. I do not think he adds on that 1s. 3d. I think he sells at that 65s.

9180. But since when has this price been in force, because I have been paying 84s. to 85s.?—Of course the cost of distribution has to be added on to this.

9181. You have just told me this is the price at which a distributing merchant would sell, and it would include his 1s. 3d. profit?—Yes; but you would have to pay the cost of delivery from a port.

9182. Do you mean simply the railway freight?—Yes.

9183. And that might run up to a great deal?—Yes. It is not a flat delivered price.

9184. Can you tell me the flat delivered price to-day?—I have had it every day that I have been here, giving the most recent dealers' prices; but I unfortunately have not got it to-day: I think that depends on the locality to which it is delivered.

9185. Then I am afraid your figures do not assist me. Does the same thing apply to your cake prices, that on to them are to be added also costs of delivery?—Yes, from the mill.

9186. And does it apply to all the other items in this Table III.?—Yes.

9187. When was the control for middlings and pollards put on?—Since the very early days of the Wheat Commission; that is some time in 1917, I should think.

9188. There has not been a controlled price all the time. For instance, the price of middlings is £15 10s. I cannot buy middlings for £14 10s.?—That is the price at which they are sold by the miller who produces them.

9189. To the dealer?—And also to the consumer. In the ordinary way a great deal of the milling offals is sold by millers to the consumers, large farmers, and that is the price imposed by the Wheat Commission. They are required, and in point of fact do actually sell at those prices. Of course they are net prices. Bags would be extra.

9190–91. I was going to ask you. The bags would have to be added to those, and that is a very substantial item?—Yes, that is so.

9192. I have forgotten how much they come to?—About 25s. to 30s. a ton.

9193. Then would there be the railway freight on to that?—The railway freight from the mill would be on to that.

9194. And the same thing applies to the other items in this table?—Yes; they are all ex mill.

9195. Another question I want to ask you is this: Does not the mere fact of keeping them controlled show you that if it were not for the control, the opinion of the authorities is that the price would be very much higher?—Yes. These prices have all been controlled for the purpose of preventing them rising. This particular control that now exists in the case of feeding stuffs was imposed some time in August or July, and was put on because the prices threatened to rise very much.

9196. And the control is maintained, because the view of the controllers is that the price would go on rising still if it were not taken off?—Yes. As soon as supplies get to be rather in excess of the demand, the control will, in all probability, be taken off.

9197. What reason have you for thinking that within a reasonable time the supply will exceed the demand and reduce the prices? That is the view which we are able to form from the statistics and prospects of future imports and so forth. It is the view of myself and of the officials of the Ministry of Food that prices are now tending to fall.

9198. On what you have already given in evidence this morning. You have no other facts that you can lay before us on which you base your opinion that prices are likely to fall because supplies are likely to overtake the demand, except what you have told us?—I have of course a great many figures and memoranda and so forth on the subject; but it is a very complicated question. Each article has to be dealt with separately.

9199. Is it really a hope or a belief that they will fall? You told one member of the Commission it was more or less a guess. Now I ask you if it is a hope or a belief?—Well, it seems to be a certainty; because, as a matter of fact, the prices have fallen slightly, even if it is only by 5s. or 10s.

9200. You mean on linseed cake?—Yes, and on several other materials.

9201. Could you tell me the other things where it has fallen already?—Palm kernel cake is one thing where there has been a small fall.

9202. You would not suggest that barley has fallen, would you?—No.

9203. I wanted certain information on this point if you could supply it some time, or could you give it now? That is the items which have fallen, and on which you base your opinion?—The items which have fallen in this table do you mean?

9204. Yes; in addition to linseed, which you have already dealt with?—No, I think there is nothing except palm kernel cake.

9205. I thought you would have difficulty in finding it. Then on those two items you base your view, except your view that freights are falling?—No, excuse me.

9206. I do not want to misrepresent you?—The view that there is likely to be a fall in the price of oil cakes is based on a consideration of the supplies which are likely to come forward and the supplies which are now in hand.

9207. *Mr. Overman*: One question as regards manures. What do you think is the prospect of our obtaining this coming year the required supply of potash which we want so badly on our light lands?—Taking potash as a whole, there ought to be no difficulty. The position which I take it you know is, that the Government acquired from Germany 40,000 tons of potash salts, mainly muriate, 30 per cent. salts and sulphate. That is now being offered for sale for agricultural purposes. In addition a licence has been issued for the importation of 20,000 tons of kainit 20 per cent. and salts from Alsace. As soon as those supplies have been disposed of, further importation will be allowed from Alsace. I should say there will be no difficulty.

9208. Will you turn to Table IV. again, for instance, and take the price of farm seeds. Will you tell us again who is the seed merchant who gives the opinion that mangel was likely to fall 9 per cent.?—Yes, I mentioned the name of Mr. Miln, of Gartons.

9209. Was he one of the merchants who gave you the average price of mangel seeds of 1919 at 110s. per cwt.?—The figures that he supplied were taken into account in arriving at this average. The price he actually mentioned was 2s. 6d. per lb.

9210. Anyone who bought mangel seed in large quantities this year could never buy it at 110s. in 1919, and the estimated average price in 1920 is 100s. You find it quoted in some of the agricultural papers this last week that mangel seeds have been making from 110s. to 130s. per ton, wholesale? I ought to say that these prices of farm seeds are really wholesale prices. Of course that is indicated by the fact that they are given per cwt. or per bushel. When I say wholesale, I mean for sale in large quantities.

9211. But how do you account for it that the quotations in the papers to-day for mangel seed are at anything from 110s. to 125s. per ton?—You will observe that the price for 1919 given in this table is 110s.

9212. I am taking the price to-day. It is from 110s. to 125s. per ton?—Quite. The new crop of mangel seed has not really come on to the market.

9213. Some of it has, in the early counties?—I agree, we are just at the precise moment when it has; but this figure of 100s. as compared with 110s. last year, indicates that the seed merchants or the seed trade consider that the price of mangel seed this season is likely to fall.

9214. Were your prices for wheat, barley and rye, taken from seed merchants' prices, or the prices current?—They are taken from the estimates of seed merchants. They are not current prices. The 1919 price may be taken as nearer to the current price.

9215. But they were seed merchants' prices?—Yes.

9216. Are the prices for 1914 seed merchants' prices?—Yes, they are all alike, returned by the same people.

9217. *Mr. Batchelor*: In paragraph (2) you give an opinion that prices of oil cake will fall in the near future. Do you know on what principle the prices were increased from £19 last control up to £25 agreed prices this year?—They were raised to £25 after discussion with the makers, and at the time that control was imposed there appeared to be every prospect of their going up. They appeared to be soaring every day, and £25 was taken as a maximum price.

9218. I suppose you are aware that immediately after the last control was taken off the prices went down. After the price of £19 was taken off, the price went down to £18 first, and then to £16?—Yes, I believe that is correct, but of course it immediately rose again.

9219. What caused it to rise?—I believe one of the most important factors was the belief that there would be heavy buying from the Continent.

9220. As a matter of fact, was there heavy buying from the Continent?—No; as a matter of fact that did not turn out to be the case.

9221. Do you know yet what put up the price of that feeding cake?—The prices of raw materials rose all over the world.

9222. Was that caused by speculation?—If you call speculation the opinion of the trade as to the probable demand, I suppose it was.

9223. Were not the Board of Agriculture represented at the arranging of this price of £25?—Yes, they were.

9224. Then could you tell me what convinced the Board of Agriculture of the necessity for those prices?—The belief that they were going still higher.

9225. Had they not figures put before them to justify these prices?—To justify what do you mean?

9226. To justify the price from £18 to £19 as the case was, up to £25?—Yes.

9227. What kind of figures were they?—It was the fact at the time these prices were fixed, that they were the market prices.

9228. That was all?—Yes.

9229. Who created the market? Did not the merchants and manufacturers create the market? Is it the case that immediately after the merchants and manufacturers created the market at £25, the Ministry of Food and the Board of Agriculture accepted those as being the prices?—It is rather a hard question to ask me.

9230. I will put it in another way. Is it the case that at the same time these prices were being agreed to, the price of oil, the other product from linseed, had also risen very considerably?—Yes, it had risen very considerably.

9231. In ordinary instances if the price of oil, one of the products, rose, the price of cake, the other product, should have fallen. Does not that follow?—Yes, it frequently happens.

9232. Therefore, is not there a very uphill fight for anybody to show that there is a necessity for a rise in cake of from £19 to £25?—Of course we had to take into account the prices which were ruling in all parts of the world and the prices ruling for linseed and other materials; and the prospect at that time seemed to be that they would go still higher.

9233. In that same paragraph it is stated that cotton seed is also said to be falling. Is it actually falling?—Cotton seed has fallen between July and a few days ago from £30 to £25. That is Egyptian.

9234. And has cotton cake fallen?—No: I do not think cotton cake in this country has fallen at all, because the supplies of cotton seed are short.

9235. Do you not think it is time for the Ministry of Food and the Board of Agriculture together, or either of them, to agree on reduced prices for feeding stuffs and publish these at the very earliest?—These are maximum prices. They have done a very great deal of good in preventing prices rising higher, and the view is that we can leave the competition of the trade to effect a reduction.

9236. But is not it also the case that they can go before the public and say that they are agreed prices with the Ministry of Food and the Board of Agriculture?—There is a very strong emphasis placed on the word "maximum."

9237. I am afraid not by the seller. Then will you look at Table III. Your prices now are prices ex mill in many instances at least. From June, 1913, to May, 1914, were your prices free on rail?—Yes.

9238. I suppose you are aware there is a considerable difference between the two nowadays?—Yes.

9239. It costs a big lot of money to take it from works and put it on rail?—Yes.

9240. At least there is a big addition made for that?—Yes; I am aware that the ex mill price is not as favourable as an f.o.r. price.

9241. Then you have feeding molasses per ton in casks £11 in September, 1919. Could that be got anywhere as low as that?—I should hope so.

9242. You know that feeding molasses have gone up by leaps and bounds within the last two months?—Yes. There is a rise shown there.

9243. *Mr. Ashby*: I was surprised to hear you say that the 1913-14 prices for feeding stuffs were free on rail, because I notice they are the same prices as those that have been used by the Board of Agriculture right through the war, and they are really Mark Lane prices. They were taken mostly from the grain, seed, oil and other market prices which were not necessarily free on rail prices. I would like you to clear that up?—Were not the prices quoted at Mark Lane before the war f.o.r. prices?

9244. I am not quite sure, but I take it that the main idea you had in view in preparing these tables was to make a comparative statement of price showing the percentage increase?—Yes.

9245. Although you had many difficulties in dealing with the quotations, you did try to get them as straight as you could?—That is so. Of course it is most extraordinary difficult to get anything like an accurate comparison of prices, especially when we had such limited sources to draw from, as in the early years of 1913-14.

9246. You have been hindered to some extent owing to the fact that prior to the war the Government had not taken much interest in agricultural prices?—That is so.

9247. When you were compiling your table of prices dealing with agricultural machinery did you consult the Agricultural Machinery Department of the Ministry of Munitions at all?—I do not think the Agricultural Machinery Department of the Ministry of Munitions is actively at work at the present time.

9248. No; but I was under the impression that their Orders as regards the wholesale prices of manufacturers of agricultural implements and machinery were still in force?—As far as I know they were not consulted. These prices were prepared by our own Machinery Department, which had a very great deal to do with costings and which also bought a very large quantity of implements and so forth during the war. I think, therefore, that these figures may be taken as accurate.

9249. I think you said, in answer to Mr. Cautley, that the control of prices of some of the feeding stuffs, because of the strong tendency for the actual market prices to rise very fast, did not interfere with the demand for them. Do you infer from that that the farmers who were buying these feeding stuffs were quite content to buy at high prices, knowing that they would be able to recoup themselves in the use of the feeding stuffs?—Yes. I do not know whether farmers were content, but at any rate they certainly did buy at these prices; the demand has been very keen indeed.

9250. They were not afraid of these prices so long as they could get the material?—That is my information. There was never any hesitation on the part of farmers about buying at these prices so long as anything could be got; I think that is correct.

9251. You had a good deal to do with the fixing of these controlled prices, especially as regards fertilisers. Is it your impression that the present controlled prices give the manufacturers a very fair profit?—They give a fair profit; we do not consider that they give an unreasonable profit. We have always had to take into account the necessity of giving the manufacturer a fair reasonable remuneration.

9252. The tendency for prices to rise was almost entirely due to the farmers' keenness to get supplies in spite of the prices? In the case of fertilisers, the cost of manufacture has gone up; that is the only ground upon which we have admitted a rise. In the case of feeding stuffs, the conditions are rather different.

9253. Is it your opinion having had so much to do with the fixing of control prices that when you have a controlled price, even though it is a maximum price, there is a very strong tendency for that maximum price to become a standard price?—There is a very strong tendency for the maximum price to become a standard price so long as the supply of material is not good; I do not think that it keeps the price up very long when the supply of material is fairly free.

9254. To put it in another way, do you think when the supplies of material are fairly good the price moves as easily when there is a maximum price as when there is no control at all?—No; I quite agree that it does not. My own view is that a controlled price never ought to be put on except when supplies are short.

9255. *Mr. Edwards*: I understood you to say that the manufacturers were reluctant to fix the price higher for sulphate of ammonia. Does that mean that the manufacturers have been allowed to fix the price at the highest possible limit?—No. The price that was fixed by the Board for sulphate of ammonia was less than the figure suggested by the manufacturers. At the same time I said that manufacturers were not out to increase prices to the very absolute maximum that they might be able to obtain, because they wished to preserve their home trade in the future and not to drive farmers into the hands of their competitors.

9256. As a man who has had a good deal of experience in fixing prices, could you give the Commission your view as to whether the high prices at present prevailing are advantageous or otherwise to the farmers and workers on the land and the community generally?—Whether the high prices are beneficial?

9257. Yes, to the workers. We are farming on a very high scale of prices compared with what we were doing in pre-war times, and I want your views as to whether the high prices which at present prevail are to the advantage of the farmer and the worker and the community generally or otherwise?—I think that is rather too general a question; I do not feel qualified to answer that.

9258. Could you give us your views as to whether the controlling and fixing of prices is a healthy way of conducting business, and do you favour its continuation in future?—No, I certainly would not favour the control of prices by the Government. I think that this voluntary control is a very beneficial thing so long as the supplies are not very ample.

9259. *Mr. Green*: Have you any indication from the purchases which have been made of grass seed lately to lead you to suppose that much land is reverting to grass?—No, I have not any information on that point.

9260. You have no knowledge in your Department—no sufficient knowledge?—No.

9261. Do you think the Anti-Profiteering Act which has just been passed will have any effect in the future as regards keeping down the prices of the commodities which farmers have to purchase?—Yes, it is quite possible it may. We have heard of cases of profiteering in feeding stuffs more particularly, and the Profiteering Act ought to be useful in the case of purchases made by farmers in their future dealings.

9262. Following upon Mr. Batchelor's question as to speculation having taken place, I think it is something beyond a mere question of the opinion of merchants with regard to the demand in the market. I should like to know whether there has not been a good deal of speculation by brokers, one broker buying from another broker and so forth, and thereby increasing the prices?—Undoubtedly that has happened in certain states of the market.

9263. Can you not check that sort of thing being done?—Yes. It was because that was happening to such an extent that the present control of feeding stuffs was re-imposed because under this system every dealer has to be licensed, and one of the conditions of the licence is that he should sell at figures not exceeding the prescribed prices. He is also subject to other conditions which do enable a certain amount of control to be exercised.

9264. Do you not think that inflated freights have really caused an artificial price to prevail in the case of feeding stuffs and agricultural machinery? The prices are undoubtedly very much higher owing to the freights, but I do not know whether they are inflated.

9265. As regards competition in the trade, is there really any competition? Does the trade now not consist of large combines and trusts in regard to feeding stuffs and cakes and oil, and so on?—There has been a certain amount of amalgamation, but I have not sufficiently original information to enable me to express an opinion upon that.

9266. Especially during war time?—Yes.

9267. During the war the Control Department has given these big manufacturers an opportunity of meeting and putting their heads together, and they have continued to meet together, and keep up prices?—Yes.

9268. Can you give us any figures of the number of tractors that we have in use in this country at the present time, compared with pre-war times?—Subject to correction I think the number is about 10,000. We imported 6,000 from America, but I am afraid I cannot give you that figure offhand. If I may supply it to you afterwards I will do so.

9269. Thank you?—I will make a note of it.

9270. *Mr. J. M. Henderson*: You were speaking about licences and some restrictions having been placed upon brokers. Did those restrictions prevent the broker from selling under a certain price?—Not under. It prevented them from selling over a certain price; it was a maximum price above which no transactions should take place.

9271. Would it not be likely that these brokers would get together and make the maximum price the standard price?—Yes, that is so; but as soon as the market goes down abroad or the market for the raw material goes down it is a fact that the price of the manufactured article does tend to go down with it.

9272. Just to refer you for one moment to linseed, a large source of supply was Russia, was it not?—Yes.

9273. If the Russian market is opened up again the price of linseed cake and oil must come down, must it not?—Undoubtedly the opening up of the Russian market would affect the price of a large number of these materials.

9274. Can you tell me what proportion of linseed came from Russia?—No, I am afraid I cannot remember that. Of course Argentina, Russia and India are the three chief sources of supply, but what the proportion is I do not remember.

9275. Russia was a very large supplier of it?—Russia is undoubtedly a large producer of linseed.

9276. The freights, of course, from Archangel to Hull, where the principal mills are, would be much less than from Argentina or from India?—Yes, no doubt.

9277. So that the tendency when the Russian market is opened up will be for the price of linseed to go down?—Yes, I should think that is so.

9278. With regard to fertilisers can you explain why with all the enormous amount of steel production there has been during the past two or three years and the many heavy dumps which have been created, the quantity of basic slag produced should have gone down?—A large quantity of basic slag was produced, but it contained such an extremely low proportion of phosphoric acid as to make it valueless.

9279. Surely these dumps from the steel works are full of sulphur. How did they get rid of the sulphur?—As I mentioned before I do not understand the process, but the fact is that there have been, and there are still, large dumps of slag from the steel works which only contain 4 to 5 per cent. of phosphoric acid which means about 10 or 12 per cent. of total phosphates and they would not be worth grinding.

9280. Do you mean the process of manufacture has eliminated a considerable quantity of the phosphoric acid?—I think I may say that there are no very large deposits of slag of a sufficiently good quality to make it a commercial proposition to grind it. These large dumps were tested during the war by the Ministry of Munitions and some of them were utilised—but you very rapidly get to such a low contents of total phosphates as to make them too expensive to work.

9281. Do you think that the quantity of basic slag produced will be increased in the future?—No, there does not appear to be much prospect of an increase in the quantity; a slight increase may be possible.

9282. With regard to potash your opinion is that the price must come down?—Undoubtedly.

9283. Owing to the supplies we shall obtain from France?—Quite—owing to large quantities of potash being now put upon the market both from Alsace and from Germany.

9284. So that on the whole you are of opinion that the price of fertilisers will tend to come down?—As a whole, yes.

9285. The effect of the freights and the opening up of new countries of supply which have hitherto been shut out will have an effect upon the price of these fertilisers?—Yes, freights particularly.

9286. Have the Board of Agriculture considered whether land growing wheat 2 to 3 quarters an acre is worth cultivating, having regard to the price of fertilisers?—I think that is rather outside my province. I do not feel competent to answer that.

9287. Do you think that the world's prices will be affected by any minimum guaranteed price being fixed in this country?—Of course one would imagine that a guaranteed price would have a tendency to keep up prices elsewhere.

9288. As a matter of fact we only produce two-sevenths of our necessary wheat?—Yes.

9289. Therefore we must buy the other five-sevenths. —Quite.

9290. If we have a minimum price for our two sevenths, the probability is that the other five-sevenths will keep up to that price at least.

Chairman: Are you quite certain that that is cross-examination in relation to the witness' evidence-in-chief? I do not mind your straying a bit from it, but asking his opinion on that subject seems to me to be rather wide of his evidence.

9291. *Mr. J. M. Henderson (to the Witness)*: You come from the Board of Agriculture and have given us evidence with regard to the prices of fertilisers and feeding stuffs, but if you say you have not considered the question and cannot answer it I am content?—I do not feel that I have sufficient information on the subject to give you any reply which would be of value.

9292. *Mr. Thomas Henderson*: Referring to paragraph (1) of your evidence-in-chief, you say the makers of sulphate of ammonia and superphosphates received subsidies from the Government, which enabled those two fertilisers to be sold at less than the actual cost of production. Were actual costs of production submitted to your Board when these prices were fixed?—Yes—strictly speaking to the Ministry of Munitions, with whom we worked in close co-operation.

9293. Can you tell me the amount of these subsidies?—The subsidy on sulphate of ammonia was £2 10s. a ton plus an allowance for acid and bags which was estimated at 18s. 4d. per ton, so that the total was £3 8s. 4d. The matter is complicated by the fact that the acid also had a subsidy on it so that it is not possible exactly to ascertain the amount.

9294. Then as to superphosphate?—In the case of superphosphate, raw materials—that is to say the rock phosphate and the acid—were supplied to the manufacturers at prices which enabled them to produce 30 per cent. superphosphate at £6 10s. per ton delivered. It is almost impossible to express it in money; very difficult at any rate.

9295. You discontinued these subsidies this year? —Yes, on the 31st May.

9296. On what ground did you discontinue them, if that is a fair question?—Simply that the war having come to an end it was proper to take off the control.

9297. *Mr. Prosser Jones*: Has your Department given any attention to the question of lime as a substitute for fertilisers?—Yes, we have given a good deal of attention to the question of agricultural lime. The position is that it is very dear, and the supply insufficient as compared with the quantity which ought to be used.

9298. Do you not think that it would have been well if the producers of lime had been encouraged by means of a subsidy?—One difficulty, of course, is that lime is used for many other purposes than agriculture.

9299. Have you any means of knowing what profits these trusts have been making during the war, when they were receiving subsidies from the Government? —The fertiliser firms?

9300. Yes?—In the case of superphosphate the accounts were very closely controlled and the margin of profit which they made was very narrow.

9301. Does that mean that you compared the profits say, in the year 1914, with those made in the year 1918?—Quite. In the case of sulphate of ammonia it is very much more difficult.

9302. It is a side issue, is it?—Yes.

9303. As regards the production of machinery is it your opinion that this country is giving the attention to the production of agricultural machinery that it should do?—I believe there is a great development in that direction going on now, but, of course, in certain directions we are not pre-eminent as manufacturers of agricultural machinery. The binders and reapers and so forth, are chiefly of American manufacture.

9304. I put it to you that this country has done remarkably well in some departments as regards the construction of machinery, and is it not possible that it could do equally as well in the case of agricultural machinery so as to eliminate imports?—Yes, quite. At the present time, of course, the exchange rate is discouraging imports from America.

9305. *Mr. Langford*: I think you stated just now that there was a subsidy given on the manufacture of sulphate of ammonia?—Not at the present time; it was given during 1918–19.

9306. I think you said you took into consideration the cost of production and then gave a subsidy to make up the price. The point I want to get is this: inasmuch as sulphate of ammonia is a by-product of the manufacture of gas, how do you arrive at the cost of production of sulphate of ammonia?—I am well aware of the difficulty of arriving at the cost of sulphate of ammonia; it is not only a product of gas, but of many other industries, iron and steel works, coke ovens and shale oil, all of which have different costs of production, even if one could accurately ascertain the cost of production of a by-product. The only reply is that a number of accounts and tests were taken and an approximate average was arrived at.

9307. My point is that in every case it is a by-product. Sulphate of ammonia is not manufactured primarily in order to produce sulphate of ammonia? —No; it is a by-product.

9308. Was your department fully satisfied that there was any need for a subsidy?—Undoubtedly; when conditions reach a certain point it is easy for the makers of this material to allow the liquid to run away, and if they are not sufficiently remunerated they will not make it although it is a by-product.

9309. I suggest to you that if they had not to do so it would have been in the first place a very unpatriotic act on the part of the manufacturers, and in the next place that they would have lost considerably more than they would have done by manufacturing it. What I am afraid of is that it will go out to the public that this was a subsidy to the farmers in the use of it rather than to the manufacturers in the making of it?—Perhaps I ought to explain that the object of the subsidy was not to enable the manufacturer to manufacture but to enable the sulphate of ammonia to be sold to farmers at a certain price. In 1917 before there was a formal control the price was fixed by a decision of the War Cabinet at £16 per ton delivered. Subsequently it was found

to be impossible to continue manufacturing it at £1- per ton and the subsidy was given in order to enable the price to be maintained at that figure.

9310. Of course you are aware that in pre-war times there was no competition in the sale of sulphate of ammonia—in other words that the prices were fixed by the Sulphate of Ammonia Committee?—Before the war the market for sulphate of ammonia was almost entirely an export market, sulphate of ammonia was exported to the extent of 320,000 tons per annum in a good year, and of course manufacturers were always able to sell abroad.

9311. As a matter of fact there was no competition and the prices were fixed by the Sulphate of Ammonia Committee. I suggest to you that the subsidy was only necessary because that Committee desired to have a larger profit than they could have obtained from farmers, having lost the foreign market?—I am afraid I must differ from you. Farmers had no other source of nitrogen than sulphate of ammonia, and if it had not been for the controlled price they would have been forced to buy sulphate of ammonia at a very much higher price than the price fixed, namely, £16 per ton.

9312. If farmers had had to buy at a higher price it would have been in consequence of the Sulphate of Ammonia Committee, which was the only individual seller of sulphate of ammonia desiring a higher profit?—You are referring to what is called the Equalisation Committee of the Sulphate of Ammonia Association, I believe?

9313. That is so. That Committee always fixes the price so that there is only one price of sulphate of ammonia from the various sellers?—There is no doubt before the war they did do so. I quite agree they advised their members as to the price they should charge.

9314. And their members always took that advice?—Probably.

9315. Are you aware of the fact that when your department stepped in and regulated the prices of all artificial manures, those prices immediately advanced?—Do you mean every time we fixed a price?

9316. The first time you fixed a price?—Prices were fixed with the object of keeping the price down.

9317. But in effect it raised prices?—I submit that it can only have prevented them from going higher.

9318. Let me put it to you in this way; a prudent farmer does not wait until the day before he wants to use artificial manures; he buys forward, does he not?—Yes.

9319. Are you aware that a number of farmers who did buy forward had their contracts cancelled, and were only able to get their manures at a greatly enhanced price, in consequence of your department fixing prices?—No, I am not aware of that, and I do not think that is quite correct. The Fertiliser Prices Order, or any arrangement that we made, did not cancel contracts in existence at the date of the Order, so that if the farmers you speak of had a definite contract they were perfectly at liberty to require the maker to carry that contract out.

9320. As you know, if your fixing prices did not break contracts, there are ways and means by which manufacturers desiring not to supply can get out of the contracts they have made?—Yes.

9321. Are you aware that that is what was done in numbers of cases?—I am not aware of it.

9322. I can give you individual cases where that has happened?—Yes.

9323. With regard to your comparison of prices—cake seeds and feeding stuffs—you have put your figures forward rather with a view to showing the increase than the actual price, have you not?—Yes, prices will vary from one seller to another.

9324. To take the case of mangold seed no small farmer could buy mangold seed last spring under about 2s. a lb., could he?—No.

9325. If you admit that these are not actual prices, that is sufficient for me?—They are wholesale prices in effect.

9326. With regard to linseed cake, do you not think it was a great mistake for linseed cake to be decontrolled when it was?—In March last?

9327. Yes?—I do not think that I ought to be asked that question.

9328. Supposing your department had bought linseed cake, I submit to you it should have been possible for them to have bought at a price which would have enabled it to be sold to consumers during the ensuing winter at £16 a ton?—Do you mean the makers?

9329. The Food Controller could have bought cake and entered into arrangements as he did last year to sell it at £16 a ton. My reason for asking you is that cake did go down, and I myself purchased linseed cake at £16 a ton. What I did the Food Controller certainly could have done, and could have secured the cake to the British consumer at a not higher price than that?—I submit there is a difference. You might purchase a small quantity, but it does not follow that you could buy a large quantity, or that you could go on doing it.

9330. I assume that the manufacturer who sold me that linseed cake was able to buy it and re-sell at a profit, and I suggest to you that the price which linseed cake has now reached has been reached in consequence of speculations due to the Food Controller de-controlling it at a particular date?—I think you will agree that I cannot answer questions which reflect upon the Food Controller.

9331. *Mr. Lennard*: Mr. Batchelor asked you some questions just now about the controlled price of linseed. I think he suggested that the farmer had been rather unfairly treated in the matter. Is it not the fact that the price of linseed has risen from £29 to £55 a ton, and that when the price of linseed was £29 a ton the price of linseed cake was £19 a ton?—I have no doubt those figures are approximately correct.

9332. Now, when linseed is £55 a ton, the price fixed to the farmer by the Ministry of Food for linseed cake is £25 a ton, which is not a rise proportional to the rise in the price of linseed?—That is so.

9333. It means, does it not, that most of the increase in the price of linseed has been put on to the other product of linseed—the oil?—Yes.

9334. I have here a statement by the Secretary of the Ministry of Food, which says: "The paint and linoleum trades are thus subsidising the farmer by paying a high price for the oil." Do you agree with that?—Yes, that is so.

9335. In paragraph (1) of your evidence-in-chief you speak of the price of superphosphate probably coming down owing to cheaper freights, and in answer to one of the Commissioners on some point you spoke of freights becoming easier?—Yes.

9336. I was not quite sure whether you were anticipating a fall in freight rates or were only thinking of greater facilities in the way of shipping at certain ports in regard, for instance, to some of these fertilisers which come a very long voyage?—I was really referring to freights as a whole, but more specifically in connection with these fertilisers. Probably importers will not have to pay so high a freight in the autumn of next year as they are doing at the present time.

9337. What reason have you for supposing that the freight rates will be lower?—Only the opinion of people at the Ministry of Shipping, who have given me that forecast as a probability.

9338. It strikes me as a layman that as the cost of shipbuilding is going up because of higher wages and higher coal prices, that will tend to raise freights?—Yes, but I understand that the rate is more dependent upon the supply and demand of shipping, and as the supply will undoubtedly improve, the freight is likely to go down. I am not suggesting a large decrease, as you notice.

9339. Is not the freight also dependent upon such factors as the wages of merchant seamen, the cost of bunkers and so on?—No doubt.

9340. Any increase in those wages or in the price of bunkers would make for high freight rates?—Yes.

9341. Do you happen to know whether freight rates form a smaller proportion of the selling price of fertilisers than they do of imported corn? On the face of things one would imagine that the freight in the case of a commodity which is of greater value and occupies less bulk, would form a smaller pro-

portion of the actual cost?—That is a question I have not worked out.

9342. *Mr. Nicholls*: Can you explain the great difficulty there is in obtaining these things that you have been referring to as regards feeding stuffs, such as bran and pollards and middlings, and those sort of things?—In the case of middlings or milling offals, the difficulty is that the importation of offals from abroad is not now so great as it was before the war, and the quantity of wheat being ground in this country is also somewhat less at the present moment.

9343. The only point in my mind is that recent experience has shown that it is more difficult to get them now than it was even during the war—during these last two months?—That is so.

9344. I wonder whether you have any idea of the cause, whether it is due to the freight or to somebody holding it up, or what the real difficulty is?—The reason is, that the proportion of wheat which is being imported by the Ministry of Food or the Wheat Commission at the present time is rather lower than it was some time ago, or last year, but it is anticipated that very shortly the proportion of wheat will rise again, and that the supply of milling offals will become more plentiful.

9345. It is a very great concern to a lot of the smaller men as well as the larger farmers?—I think I may say that is recognised by the Wheat Commission, and as soon as they are able to do so they will arrange to import more wheat so as to provide more offals. Perhaps I might mention that the importation of maize is likely to be very much higher, and that will to some extent relieve the demand for offals.

9346. When you go and tell people the control price is so and so, they say, "All right, but it is no good telling me what the price is when you cannot get it of any kind." I have been in touch only last week with numbers of small men who breed pigs, and they cannot get hold of any?—Yes, but the quantity that is being produced is really considerable; it is produced at the rate of over one million tons per annum.

9347. You think that within a short time there is a hopeful sign of larger supplies?—I expect that the supplies will become more plentiful shortly after Christmas; I am very doubtful if much change is probable this side of Christmas.

9348. *Mr. Robbins*: You have made no reference to flue dust potash in your statement. Do you regard that as any longer of commercial value?—I think now that potash is likely to be much more freely available the demand for flue dust will fall off. Potash will still continue to be extracted from the high-grade flue dust, but the lower qualities will only be used by farmers in the neighbourhood of the works where it is produced, who are able to send a cart in and take away what they want.

9349. Do the Government still hold shares in the British Potash Company—perhaps I had better not ask you that? You do not make any reference to organic manures in your précis?—No.

9350. Do you regard the supply of organic manures as being a negligible quantity?—No, not at all, but the real difficulty is to get any statistics on the subject. The price of organic manures, such as bones and blood, and so forth, were very high during the war, and they are still high.

9351. If the figures relating to organic manures were included, your figures in Tables I and II would have to undergo considerable modification, would they not?—Yes, I think they would undoubtedly make a difference.

9352. Do you know if the Government did anything to increase the supply of organic fertilisers during the war?—I think I am safe in saying that they did not.

9353. You told us that they gave a subsidy to manufacturers of superphosphate and sulphate of ammonia?—Yes.

9354. But there was absolutely nothing for the manufacturers of organic manures?—No.

9355. Did they do anything to retain the supplies of organic manures that there were in this country?—The export of bones and all other fertilisers was prohibited during the war.

9356. Is it not the fact that during a period of great scarcity licences were given for the exportation of high-grade meat, meals, blood, bones and other highly valuable organic manures?—Only to a very limited extent.

9357. It was not done to help their sulphate of ammonia scheme, was it?—No; it was done because it was necessary to send some small quantity to France. I believe France was the only country that took any blood and meat meal. The price in this country was so very high that the holders complained that there was no market here, and if a small export was not allowed they would be ruined; that was the reason given.

9358. Did you believe them?—I am not expressing an opinion.

9359. I suppose you did, because you allowed the export?—Yes, to a certain extent.

9360. The ratio of increase in price was very much greater in the case of organic manure than it was in the case of inorganic manure?—That is so.

9361. You get bone meal rising from £6 to £20, and other organic manures in the same ratio?—Of course, as you know, we controlled the price of compound fertilisers.

9362. That had the effect of eliminating the organic manures?—Yes, it was not profitable to put organic manures into the compound fertilisers under the terms of the Order.

9363. Therefore you lowered the standard of compound manures?—There was an ample supply of these artificial fertilisers.

9364. From mineral sources?—Yes.

9365. Is the exportation of organic manures permitted to-day?—Yes.

9366. Notwithstanding the very high prices?—I think the prohibition has been removed in the case of most of the fertilisers.

9367. Do you still consider it more in the national interest that hoofs, horns and bones should be used for manufacturing ornamental waistcoat buttons and combs, and such things, as was done during the war, instead of being used as fertilisers?—I suggest they were not the same bones that were used for those purposes. It is a very different class of bone which is used for waistcoat buttons, and so forth, from the class of bone that is ground up and used as fertilisers.

9368. I know of a firm that lost a contract for hoofs and horns because a firm of manufacturers outdid them?—I am aware that during the war, owing to the necessity of increasing the supply of fertilisers, these high-class bones had to be used.

9369. *Mr. Smith*: You state in paragraph 2 that during the war potash was only available in comparatively insignificant quantities. Has anything been done to increase the output of potash?—The home production?

9370. Yes?—Yes, a factory was put up at Oldbury for the purpose of extracting the potash from flue dust; that was assisted by the Government to a large extent, and is still in operation.

9371. Is it not true that there has been a great deal of potash wasted as a by-product in the case of some industries—blast furnaces, gas-producing works, and in the iron trade?—No doubt, but I presume it was not commercially possible to recover it at the time.

9372. Is it not true that some of the waste in the cleansing of gas has given a residue of which 70 per cent. is pure potash?—Yes, I believe so.

9373. And that it has been thrown away?—Yes; but I understand those gas-cleaning plants are a comparatively modern invention. The attention of the blast furnace owners has been drawn to them, and many of them are putting them in.

9374. May we take it that this waste is being dealt with and that this potash will be available?—Yes, if it is a commercial proposition.

9375. Surely it cannot be anything but a commercial proposition if you are able to extract 70 per cent. of pure potash from a rubbish heap?—The plant, &c., is an expensive thing. If the price of potash fell much below the present price, it might not be a commercial proposition.

9376. You agree that there is a probability of increasing the production of potash by a more scientific utilisation of some of the waste products?—Undoubtedly.

9377. I understood you to say, in answer to Dr. Douglas, that the Government was paying higher freights in order to get supplies of superphosphate?—No, not the Government; the Fertiliser Manufacturers' Association. The Government is not now importing phosphate rock.

9378. At any rate, that higher freights are being paid, which will mean higher costs?—Higher shipping charges.

9379. Which must mean higher costs for the article itself on the market?—Yes.

9380. Has the possibility of organising a national shipping service to get this stuff over, so that they will not have to pay these high competitive freights, ever been considered? The suggestion has often been made that the Government should do so.

9381. A suggestion has been made?—Yes.

9382. It seems rather regrettable that the price should have to go up when a little organisation might get them over at a cheaper rate?—It is a question which is bound up with the whole question of shipping control.

(*The Witness withdrew.*)

MR. L. N. GOODING, Norfolk Chamber of Agriculture and Farmers' Federation, Ltd., recalled and further examined.

9383. *Chairman*: You have been kind enough to give us, as you promised, certain additional evidence-in-chief containing information which the Commission desires, and further than that, certain information which you thought might be useful?—Yes.

9384. That is embodied in the paper to be printed as an Appendix,* which you describe as your additional evidence-in-chief?—Yes.

9385. May I take that as put in?—Yes.

9387. *Mr. Green*: I have not had much opportunity of studying your accounts, I am sorry to say, but I am sure my colleagues will ask you many questions which I cannot think of for the moment. In your Summary of Profits for "A" farm you show an average profit made for 10 years of £260 a year?—Yes.

9388. In spite of the loss which occurred in three years amounting to £895?—Yes.

9389. In your other farm accounts you allow for income tax deductions. Take farm "B," for instance?—Yes.

9390. Do you think you are justified in deducting the income tax?—I have taken the income tax off because I thought I was not allowed to charge it as an expense to the farm, and it had been charged in the farm accounts.

9391. You did not deduct it in the case of "A"?—In the case of "A" it is taken out; it is not included in the accounts. In farm "A" it is a receipt and payment account and in the other case it is a profit and loss account.

9392. It is schedule "D" in the other case, is it?—It is the same in all the other farms.

9393-4. With regard to the capital invested in the farms, you say, "I estimate that the capital required to work this farm to-day is not less than £10,000, interest on which at 5 per cent. is £500 per annum"?—Yes.

9395. Is that £10,000 the original capital put into the farm or is it the estimated capital at the inflated prices at present prevailing?—It is the estimated capital that would be required to take the farm over at the prices prevailing to-day.

9396. That is quite a different thing from the actual capital put into the farm?—Yes.

9397. On page 10 you say the cash result of growing one acre of wheat, barley and oats on each class of land shows a loss of £3 18s. in the case of wheat; a profit of £1 5s. 9½d. in the case of barley, and a loss of 9s. 7½d. in the case of oats?—Yes.

9398. During how many years is that?—That is really a summary of the estimated cost of growing wheat and the other crops this year.

9399. I imagine a large wheat and oats grower would be making a very considerable loss on those figures?—Yes, unless he made more than the Government guaranteed price.

9400. Of course, they are making more than the Government guaranteed price?—Just at the present, yes.

9401. How is a farmer, on results such as those, going to carry on his farm and make both ends meet?—They only grow a small proportion of wheat on most farms, and the profits made to-day are more on the stock than on corn, I should say.

9402. You admit that a profit is being made on live stock?—To a certain extent, but there are other things on which farmers make a profit. A farmer may grow a field of seed and make a profit on that. There are several side lines on a farm where a farmer may possibly make a profit. Although he is making a loss on his corn, he may make it up on something else.

9403. What do you mean by side lines?—An unusual crop—a crop of mustard seed or a crop of clover seed, for instance—although I should think this present year the farmers in Norfolk will have a difficulty in making both ends meet; there is every appearance at the present time of his making no profit at all in a good many cases.

9404. The land in your district is by a long way the worst land in Norfolk, is it not?—No, I should not call it the worst; it is light land, of course.

9405. *Mr. Thomas Henderson*: Taking these figures on page 10, "The cash results of growing an acre of wheat, barley and oats": do you include Income Tax in the cost of production there?—I have put nothing down for Income Tax in those figures.

9406. I see in your Payments account you have included "tithe rates and taxes, including Income Tax," in the case of farm "A." Is that right; does that include Income Tax?—I have taken out the Income Tax in farm "A." There is a mistake there in the printing; it should be "excluding Income Tax."

9407. *Mr. Prosser Jones*: Is that your own farm?—"A" is—the one I manage for Mr. "X."

9408. The farm referred to on page 4?—Yes.

9409. Do you tell the Commission that the banking account of the farmer corresponds with the figures you have given here?—Oh! yes; these are actual figures; these accounts have all been audited, and I guarantee them to be correct.

9410. That means that the actual financial position of the farmer is as shown in these figures?—Yes, as far as that particular farm is concerned Mr

* See Appendix No. 1. (All subsequent references in the questions are to this Appendix unless otherwise stated.)

"X" has other farms, but with regard to that particular farm the figures are absolutely correct.

9411. The future does not hold out much hope for the farmer according to these figures?—The future for these light land farms is very bad, and at present I fail to see where they are going to make a profit.

9412. In that case a guarantee would be of very little use?—The present guarantee would not be of much use.

9413. *Mr. Langford*: Is this "A" farm one you are farming yourself?—Yes.

9414. What is the rental of it?—There is no rent—at least, we do not pay any rent; I have put the schedule A assessment in.

9415. Is it Mr. "X's" own property?—Yes. I am farming it as agent for Mr. "X." I have put the schedule A of assessment in and the tithe, which is how we have to do it for the Income Tax returns.

9416. Mr. "X" is the owner and occupier, so to speak?—Yes.

9417. What are the adjoining farms of similar land let at?—I have got particulars of the adjoining farms here, only they are all rather a different class. Farm "B" adjoins farm "A."

9418. Can you give us any rough idea as to what similar land in the district is rented at?—This schedule "B" assessment is £344, which, I should say, is a very fair rent for the farm.

9419. That is less than 10s. per acre?—Yes.

9420. Your average profit for the last 10 years has amounted to £260 a year?—Yes; that is without paying interest on the money invested.

9421. You have paid no interest at all?—No.

9422. So that if you had paid interest on capital your small profit of £260 would have been turned into a very substantial loss?—That is right.

9423. What is the chief reason that you have not made a better profit; there must be some reason for it?—The farm has been farmed strictly on a commercial basis; we have done everything we could to make a profit The chief reason, more often than not, is the effects of the weather; a drought at some time in the year generally ruins the crops to a certain extent.

9424. Surely you have not had abnormally bad weather in the case of this farm during the whole of these 10 years?—Nearly every year there has been a drought during the early spring or summer, which affects this land very much.

9425. You have not been short of capital?—No, there is unlimited capital.

9426. Have you had too much capital—because there are concerns which are over-capitalised, as you know?—We have not had too much; we have always had what we wanted.

9427. You do not put these figures forward as representative of the profits that ordinary farmers make on similar sized farms, do you?—On this class of land, I do.

9428 Has any of the land in your district been sold recently?—No, not for a considerable time.

9429. No tenant farmers in your district have been purchasing their farms?—Yes, within a few miles round, some of them have.

9430. Can you judge as to the prosperity, or otherwise, of your neighbours' farms; do you think they are doing about the same as you, or better or worse?—People farming the same class of land are all telling me now that they are unable to make a living out of it.

9431. What do you suggest should become of this land in the future?—The only thing I can suggest is that the greater part of it will be laid down to grass and the best part of the land will be farmed. That is the only thing I can see to do with it.

9432. I observe that during the national crisis you have not ploughed up much additional land?—That is so simply because we had all the suitable land ploughed up before the war.

9433. Does not your suggestion of what should be done with the land in the future imply that if you had been wise in the past you would have put the land down to pasture? Why did you not do that?—Why did we not put it down to pasture before?

9434. Yes?—Because it did not cost so much for labour; it is the labour question which is the trouble on these lands.

9435. I submit to you that if you had laid it down to grass, your labour bill would have been considerably reduced?—Certainly.

9436. Your profit, therefore, would have been so much higher?—That is probable.

9437. That being so, why did you pursue a method of farming which gave you a minimum of profit pre-war? Why did you not take advantage of the method of farming your land in the best possible way, namely, putting it down to pasture and thereby getting a higher profit?—It is not at all certain that we shall get more profit if we lay it down to pasture; the only thing we shall do is to reduce expense.

9438. I take it that what the Commission would like to know from you is what is your panacea for the evil of making small profits in the future. How do you propose to deal with this land to make a better profit than you have made in the past?—As I say, by cultivating the best of the land and laying the other down, and keeping more breeding and pedigree stock.

9439. You might make better profits in that way?—Quite possibly.

9440. Then you agree with me that in the past you have not been farming this land in the most suitable manner to make the maximum profit?—It is an open question; we may not make more profit the other way, but we are going to try it; we think possibly we may.

9441. Is there a large area of land similar to yours in the district?—Yes, there are several large estates round about.

9442. From the national standpoint that land is of very little use?—We have been farming it to produce all the corn possible in the past, but it has come to this, that the expense is so great that we shall have to give up growing corn on that land.

9443. That is what I should imagine. What is the average yield of wheat crops that you grow?—I gave you that in my previous evidence. The average yield of wheat is 32·88 bushels on that farm, but as I said, we always grow wheat on the best land under the best conditions.

9444. What is the average for barley?—17·92 bushels.

9445. And oats?—The average for oats is 33 bushels; that is over a series of six years.

9446. Yours is light land?—Yes.

9447. Do you plough with a double furrow?—Yes, we can do so with two horses.

9448. You can work almost in any weather I suppose?—As soon as it stops raining we go to work.

9449. You have got on this land distinct advantages over farmers who are farming on heavy land?—Yes, in the respect that we can get to work very often when they cannot.

9450. You keep a lot of sheep I suppose?—We keep a flock of ewes

9451. Are you able to hurdle?—Yes.

9452. Do you want to give the Commission an impression that farmers in your district farming similar land are doing no better than you are doing?—Certainly. I take it there could not be a farm farmed in a more businesslike manner than this farm has been farmed for the last 20 years, and on similar land I cannot see how any farmer could make a better return than we have done, working under similar conditions.

9453. Have the farmers in your district gone into the Bankruptcy Court?—They have not done so recently, but it is likely that they may very soon.

9454. Do they rear families there?—Not very big ones.

9455. Have you ever known a farmer set his son up in farming?—Oh yes.

9456. Where does he get the money from?—He very often borrows the capital, but I could not say.

9457. I am a farmer myself, and I would not like this statement of yours to go before the Commission as being in any way representative of the farming industry in England generally?—Certainly not, but it is representative of land of a similar class in the district.

9458. I should think the owners of this land would be glad to give it to the State to cut up for small holdings or something of that sort?—Oh no; it is no use for small holdings.

9459. Are there no small holdings in your district?—No, the land is not good enough for small holdings.

9460. Have not your County Councils inaugurated any scheme of small holdings on land in the district?—No, they have not.

9461. Are they going to put any discharged service men on to the land round about?—No, not in this district; it is quite unsuitable.

9462. Do farmers remain in your district long or do they farm for a time and leave quickly and go to some better district?—They manage to stop there, a good many of them, and make a living; they manage to live, but they do not get much return on their capital.

9463. Your farm is above the average size, is it not?—Yes, I should say it would be rather bigger than most of them.

9464. If you can only make so small a profit on a farm of so many acres managed on the best lines with unlimited capital and resources, how are the tenant farmers going to make a living on smaller farms?—I do not know how they are able to live, but they manage to exist.

9465. I submit to you that these figures are not representative of farming on the best land in your district?—With regard to similar land, I know it is representative. I have seen the accounts of farmers who are farming a similar class of land and they show similar returns.

9466. What do you suggest the Government of the day should do to assist you and neighbouring farmers farming on similar land in that district?—That is a very hard question; I hardly know what to suggest; I do not think I would like to express an opinion on that.

9467. Do you agree with me that for your land and land of a similar class there is a hopeless prospect for farming in the future?—No, not altogether; there are several thousands of acres of this class of land in Norfolk, and my suggestion is that the prices of produce should in some way be fixed—I cannot tell you how exactly—so that farmers farming this class of land should be able to live.

9468. Supposing the Government were prepared to do something for farmers generally which would enable you to live in the future and pay high wages—wages giving a proper value to the labourer—would you agree with me that other farmers in England would become fabulously rich?—No, I should not, because the expenses on the other class of land are much higher.

9469. In what way are the expenses, we will say, on a heavy class of land more than yours?—They would be much heavier than our expenses, but their returns, of course, would be larger.

9470. Supposing the Government gave a guarantee in the case of wheat of 100s. a quarter, would you then be able to make a reasonable profit?—We could grow wheat on our best land at 100s. a quarter and get a profit. The cost of growing an acre of wheat on this land, as I show in my returns, is 41s. 11d. a combe, and if you gave a guarantee of 50s. a combe we would get a profit.

9471. *Mr. Lennard*: Do these costs of production which you give on pages 7 and onwards refer to land on other farms than those two in respect of which you have given the balance sheets?—Yes, the cost of production is supposed to be typical for the county, it is an average cost.

9472. It is not an account of the cost kept in a ledger, but an estimate?—Yes, but these have been gone through by a committee of farmers with me for the purpose of producing them here, and they show, in the opinion of that committee, an average cost of producing each crop on each different class of land.

9473. They are estimates?—Yes.

9474. You give an estimate for the cost of growing an acre of wheat on various types of land?—Yes.

9475. Of course, this cost covers the production of straw as well as the production of the wheat, and therefore I suggest to you it is hardly fair, is it, to compare this cost with the guaranteed price of wheat only?—It is very unusual to sell much straw off these farms, except in the case of those farms which are situated near a large town. The straw remains on the farm in most cases and goes back to the land in the shape of manure.

9476. It is not the whole of your straw that goes back to the land in the shape of manure, is it?—The greater part of it: we hardly ever sell any straw.

9477. Have you not any thatched buildings or cottages?—Very few now.

9478. There is the thatching on your stacks?—That goes back into the yard after it has been used.

9479. All this service to the other operations of the farm is performed by the field of wheat, is it not, and surely something should be credited to the wheat field for these services which the straw performs to the other farm operations?—You mean a proportion of the value of the straw should be credited to the wheat crop?

9480. Yes?—Possibly a small part should be.

9481. Do the figures you give for rent in the balance sheet include the rent of a dwelling-house?—Yes.

9482. I mean, does your cost of production, which is an average one, include the rent of the dwelling-house on the farm?—Yes, it would be occupied by the farmer or his foreman. In most cases these houses are occupied by the working foremen on the farms.

9483. It is unusual, is it not, in business to count the rent of the business man's house as part of his cost of production? One usually regards the rent of one's house as something on which you spend part of your income, and not as part of the cost of production in obtaining the income?—You have to pay it out; it is part of the outgoings of the farm, is it not?

9484. Yes; but that would equally apply to the farmers' own food and clothes?—I take it if a grocer hired a shop and he lived over the shop, the rent of the shop would be included as part of the expenses of the business.

9485. Yes, but there is a difference between the rent of the farm buildings and the rent of the dwelling-house, is there not?—It is all part and parcel of the farm.

9486. I admit it is difficult to detach it, but that should be recognised when one is making out the cost of production?—I do not quite agree. I think the total rent of the farm—what the farmer pays for the farm—divided by the number of acres gives a fair estimate, as near as you can get it, of the cost of each acre of land for rent.

9487. You do not think anything should be deducted for the fact that he gets a dwelling-house?—I do not see why it should.

9488. You would not expect any other businesses to get the rent of the dwelling-house allowed as part of the cost of production, would you?—A great many do, do they not?

9489. I should hardly have thought so. Is there much game preserving in your district?—Not excessively.

9490. There is a good deal?—Not very much at the present time. The game on these farms has always been kept down within reasonable bounds. I may say, with reference to the ground game, it is always killed practically the whole of the year; it is not allowed to overrun the farms at all. Every means is taken to protect the crops from the game.

9491. Does that apply to the light land of Norfolk generally?—In most cases I should say it does. There are a few farms where the game is a nuisance to the farmer no doubt, but, as a rule, it is kept within bounds.

9492. You do not think it would make much difference to the yield of the crops if there was no game preserving on the kind of land throughout Norfolk of which you have taken these figures as typical?—Not generally, because in most cases the game is retained by the owner of the land, who perhaps is farming the land himself, and where you get a resident landlord like that there is not often much trouble about the game. It is where the shooting is let to outside tenants who come down to shoot, and do not care anything about the farmer, that the damage is done to the crops, as a rule.

9493. Is that common in Norfolk?—No, I should not consider it is common.

9494. Do you consider that the yields which you estimate here are based on a condition of affairs under which there has been a lack of fertilisers during the war? Would you expect in a normal condition of the supply of fertilisers to get rather a better yield than you show here?—Do you mean the estimated yields on the different classes of land?

9495. Yes, I was thinking primarily of that?—They were fixed by the committee of farmers too, except in the case of light land where I got the actual returns. They were as near as they could estimate the average yield which is produced from that class of land. The Committee were of opinion that if we used fertilisers it is just possible that those yields might be increased, but the cost would also be increased, and it is an open question whether we should show a profit or a loss by using them.

9496. Do you consider that is also true of the light lands for which you give actual figures?—Yes, as a rule the light land does not pay for much artificial fertilisers on account of the weather and drought.

9497. Is any of the land for which you give figures—either the actual figures in the case of the "A" Farm or the estimated figures—land which was ploughed up by order during the war?—There is a small amount in "A" Farm, about 17 acres. It was not ploughed up by order; it was ploughed up on account of the urgent necessity of growing more corn.

9498. It was not considerable enough to influence the financial returns?—No. We did not receive any orders from the War Committees to plough any up, simply because all the suitable land was already ploughed up before the war.

9499. Do you think that the land which was under the plough before the war included some land which was unsuitable?—It is just possible that some of it did not pay before.

9500. Do you really consider that the rotation employed on these farms is the one most suitable to the particular type of land?—I think the one we are now doing is. We are growing lucerne now and leaving it down for a number of years.

9501. I am referring to the time to which these profit and loss accounts refer?—Yes, I think so; we have always tried to do the best we possibly could with the land.

9502. By that you mean you have adopted the rotation which you considered would be most profitable?—Yes.

9503. The farms in respect of which you give figures are not the only farms which Mr. "X" occupies and which you manage for him, are they?—Yes, they are the only ones he occupies himself.

9504. Do you know whether his other farms which are occupied by tenants have proved more profitable than these two farms?—I could not give you the figures for the tenants.

9505. In your previous evidence, at Question 4710, you said you yourself were not in favour of a guaranteed price. Have you any alternative suggestion to make?—The feeling amongst farmers to-day is that they want to be left alone to a large extent. If there was a free market for everything, if they were allowed to buy and sell in the open market, the feeling, I think, on the part of most farmers is that they would be better off than under a guaranteed price, although there must be some form of security. I am not able to suggest exactly what form that should take, but there should be some form of security, for the farmers growing corn will not grow it at a loss.

9506. It is rather difficult for us to know what is wanted if you cannot suggest any other form of security and yet are dissatisfied with the existing form of guaranteed prices?—I agree. I think it is inevitable that there must be some form of guarantee for the future for a number of years; whether it is a guaranteed price or a guarantee of so much per acre for growing corn, I would not like to suggest

9507. Do you think that farmers in your part of the world are of opinion that the world prices of corn are coming down?—Yes, they have got that opinion.

9508. *Mr. Nicholls*: I think you said that nearly all the farms in your area are large farms?—Just round my immediate neighbourhood they are.

9509. In the case of these farms that you are depicting here you have got light land, mixed soil, and one or two cases of heavy soil?—Yes.

9510. Are we to understand that there are really no smallholders living in that district who are doing at all well?—Just in that particular district there are no small holdings at all.

9511. That is what I wanted to find out. Did I understand you correctly to say that they plough this light mixed soil land with a double furrow with two horses?—We do not always plough with a double furrow; we very often break the lea land with a single furrow, but you can plough the second time with two horses and a double plough, and sometimes the first time.

9512. What happens in the case of beans?—We never grow beans.

9513. And clover?—As a rule we should have three horses on a double plough.

9514. I notice you have an item here for bird scaring. I am rather interested in that, because I really want to know what the class of bird is that this refers to, if there is no game in your district?—There are very large flocks of rooks in the neighbourhood, and jackdaws; they are the principal trouble.

9515. How long do you think a boy would have to stop in a field—how many weeks?—A boy would have to stop there three or four weeks until the corn is out of the way of the game and the birds and rooks.

9516. Do you put game in?—We will say the rooks; if you like—birds.

9517. How many acres do you think a boy would control? Supposing he had got nothing else to do, he could manage 50 acres, could he not, if it were there?—If it were all close together, yes.

9518. Supposing it is not all close together. Do they let a boy go there to look after 10 acres of land and do nothing else?—No, not a little piece like that.

9519. What does the boy do besides drive the crows off?—The fields are not all together and he has to go backwards and forwards from one field to another to keep the birds on the move.

9520. Does he do anything else except bird scaring?—Not as a rule. If you put him on to anything else he does not scare the birds—that is my experience.

9521. You really think it costs as much as 1s. 3d. an acre?—Yes, I do not think you can put it at much less than that.

9522. You do not have much trouble, do you, to get boys to take that work on as piecework at that rate, do you?—Boys in my neighbourhood want very high wages as a rule, and I do not think they would care to undertake the work for three weeks at 1s. 3d. an acre.

9523. I have summed it up in my own mind and the conclusion I have come to is that this land which you are interested in, and have been talking about, is really an unsound proposition altogether, and that neither guarantees nor anything else are any good. Is this land any good for grass?—Yes, it will grow lucerne; it grows good crops of lucerne.

9524. You cannot go in for all lucerne; you have to have something else, and what I want to know is, if this land is no good to a farmer to grow cereals—

and from your own figures that is proved, and I do not think anybody here would suggest that even the moderate sum of a £5 guarantee per quarter would be any good in your case—what use is this land?—The best of this land will grow rather better crops than I have got down as the average return. The principle in the future will be to lay down the worst of the land to lucerne and to crop the best of the land.

9525. On a farm of this size how much lucerne could you do with? Supposing all the farmers in that district were to say: "Wheat growing is no good; the land is not much use for grass, and we will go in for lucerne," what would be the position then?—You would simply make it into hay and sell it.

9526. Is that a sound proposition?—I should say so; I should say it is the best thing to do with the land at the present time.

9527. Would it not be better to say: "This land is really no use for the purpose of cereals"? That was the answer to Mr. Lennard—that you hardly knew what this land really could be used for. It is no good for cereal growing, it is a poor proposition for roots, and if you turn it into lucerne you get rid of the game, because they will not live on lucerne if there is not something else as well. You would therefore be killing two birds with one stone. You would have a profitable industry, and would not have to bother about guarantees at all. Is there anything in that, do you think?—Part of the land is suitable for corn growing, and all the best of it I maintain should be cropped, and the rest of it laid down to lucerne and grasses.

9528. Is it not your suggestion that the best of it wants a guarantee of £5 a quarter to make it a paying proposition?—I did not suggest £5 a quarter; somebody else suggested that figure. I said in my previous evidence that in the case of these light lands it costs 83s. 10d. a quarter to grow wheat without paying interest.

9529. Is that on very light lands?—That is on the best land on these light land farms. Of course wheat is always grown on the best of the land; we should never dream of putting wheat on land that we should lay down to lucerne, and that cost of growing wheat is without allowing the farmer any interest on his capital; he should have something over and above that to pay interest on his capital.

9530. Does that apply to the gentleman whose land you overlook? Do you suggest he should have something for interest on his capital?—I suggest that the price should be fixed on the cost of production plus interest on the money invested in the farm and something for the farmer's own time.

9531. That is, in this case, Mr. "X"?—Yes.

9532. You are a kind of overlooking agent for him?—Yes.

9533. But you have also a sort of farm foreman on the place who really does run the show in respect of whom you charge 4s. an acre for foreman's management?—Yes, that is the working foreman on the farm.

9534. He is really the man who is the brains of the business?—No, I beg to differ from you, he is the man who looks after the labourers.

9535. That is the most difficult job of any in these times. The man who goes round on horseback and looks round and keeps the accounts square has not a fleabite of a job compared with the working foreman's. It is the working foreman who has to stick his back into it, and his brains too. I am a little bit puzzled about these figures because the man whose money is invested in the farm has to live out of it, and the man who rides round to overlook it and cast his eye over it has to live out of it, and the working foreman, who is the practical manager of it, has to live out of it, and then there are the labourers under him who have also to live out of it? There is nothing charged in these accounts for the agent or the owner, only for the foreman.

9536. There is the rent?—The rent would have to be paid in any case if the farm were let.

9537. I know, but I thought this land was not worth more than 10s. an acre?—Some of it is worth more than that. I have taken the rent at half the Schedule "B" assessment, which is £344.

9538. I should appeal to some of the Norfolk farmers that £1 and 30s. an acre is a very high rent for this land, especially when some of it, as you have proved, is no good to anybody? The point you overlook is that the wheat is always grown on the best land on the farm and under the best conditions, and that that land is worth £1 an acre and possibly more.

9539. Yes, but you are not always growing wheat?—No, a four course shift.

9540. Wheat is only one in four?—Yes, but that land upon which the wheat is grown is worth £1 an acre for the four course shift and there is other light land on this farm which we shall lay down to lucerne which is not worth perhaps more than 6s. to let, and the average rent works out about 10s.

9541. What I am puzzled about, and what I am really worried over too, is that for over a period of years a man has been suffering these business losses every year and still goes on, and that his son when he gets married will want to take on his father's farm. Surely if your figures are accurate the son would have sense enough to say it was not a paying proposition, whereas what he really says is that his father, who has apparently been losing money every year for a number of years, has not got at all a bad job, and is willing to take it on. There must be something behind the scenes that these men who make a living out of farming know which the outsider does not know. It seems to me, unless I am daft, that as soon as I saw this proposition I should bundle off and never dream of staying in Norfolk or touching farming on this land at all?—There is such a thing as the privilege of living on a farm—the social position a man gets—and a man may be prepared to take less interest for his money in that case than he would if he invested it in Government securities.

9542. I know, but the privilege in this case apparently is that the man stands to lose everything he has got, because he is worse off at the end of each year?—I do not see that.

9543. The whole thing is really a sort of puzzle to me? All I can say is, these figures are absolutely correct in every case. I have kept the accounts myself for the last 20 years, and they have been audited every year, and I will guarantee that all these figures are absolutely correct.

9544. I do not dispute the figures, but I have had so much to do with figures that I know something about them.

9545. *Mr. Parker*: In answer to a question by Mr. Green you said that the £10,000 capital referred to on page 4 was only an estimate?—Yes, that is as near as I can estimate what it would cost to take over the farm to-day.

9546. It is not a question of the actual capital employed, but an estimate of the capital you think would be necessary to work the farm to-day, which consists of 822 acres?—Yes.

9547. What capital did you employ on this farm in 1914?—In 1914 we had £7,068.

9548. What capital are you employing to-day?—£10,000.

9549. Then it is not an estimate, but an actual sum?—That is as near as I can put it, having regard to the present market values, what it would cost to stock the farm and leave you enough floating capital to carry on.

9550. Do you consider that £10,000 capital is a sufficient capital nowadays to enable you to farm 822 acres?—In this particular case it is; it would not be as a rule.

9551. *Mr. Robbins*: In respect of farm "A" you say you charged schedule "A" assessment as the rent?—Yes.

9552. You do not seem to have done that in the case of the other farms?—There is schedule "A" assessment plus the tithe in the case of farm "A"; the others are just the profit and loss accounts.

9553. If rent has to be taken into account in one case does it not have to be taken into account in the others?—Yes. I have shown what the rent is in the Table at the end. On Schedule "B" assessment of £682 the rent is £341 in the case of farm "B" and

the average profit for the 10 years £680. I have deducted the schedule "A" assessment from the average profit for 10 years.

9554. The deduction to be drawn from these figures is that in the case of a mixed soil farm there is a fair living to be got, whereas in the case of the other farms it is not a paying proposition at all?—That is so.

9555. You say these accounts have been audited by an accountant?—Yes.

9556. In farm "D" you show in the summary of profits an average profit for nine years of £1,088?—Yes.

9557. You explain that by calculating interest on a hypothetical capital?—Farm "D" should have the schedule "A" assessment deducted which is £431.

9558. It is not deducted?—It should have been; that is an omission.

9559. *Mr. Smith*: There is one farm here that you speak of which has been let to a new tenant since 1915 at a rental of £350 per annum?—Yes.

9560. Do you know whether he has been losing money or making money since he took over the farm?—I could not say.

9561. On these figures shown here he would have a difficulty in making a living, would he not?—I should think he probably has.

9562. In the average profit for six years of £402 is there anything allowed for rent in the figures you give?—Which farm are you referring to?

9563. Farm "C" on page 6.—There is an omission there in the printing. Schedule "A" assessment of £250 should have been deducted for the rent.

9564. That would reduce the profit?—That would reduce the profit to £152.

9565. If a man has to pay £350 a year rent, he would be losing money every year on those figures?—Yes, unless he made more profit than we did. I would like to point out that in this case these are pre-war figures up to the year 1914. During the last four years there have been more profits made in farming.

9566. You would agree that in these years you have mentioned here—1909 to 1914—there are two of the worst years that farmers have experienced within the last 20, are there not?—No, I do not think so.

9567. Not the years 1911 and 1912? In the year 1911 there was an excessive and prolonged drought and in the year 1912 there was excessive rain, was there not?—They were two very bad years; I do not know that they were the worst within the last 20 years.

9568. At any rate they were quite exceptional years. I suggest to you that the year 1912 would be one in 30 of its kind?—It was a very wet year.

9569. The year 1911 in which there was an excessive drought would also be a very exceptional year. You state that wheat cost 83s. 10d. a quarter to grow without allowing for any interest on capital?—Yes, that is so; all these estimates are without making any allowance for interest on capital.

9570. Do you know the small holdings in the Swaffham district?—I know where they are situated: I have never been on to them.

9571. The land there would be similar to some of your own land, would it not?—No, it is better-class land than ours.

9572. It is very light land, is it not?—There is some light land, but the small holdings I should say are better land than ours.

9573. If it were described as exceedingly light land, would you agree?—I have never been on to the Swaffham small holdings and, therefore, I cannot say.

9574. Exceedingly light land would compare with some of the land you have been speaking of and with which you are connected?—I should call some of our land exceedingly light.

9575. If it has been stated that the cost of growing an acre of wheat is £7 11s. 9d., and that the land produced 4 quarters to the acre, that is rather a big difference from some of your own figures, is it not, which work out at about £16 an acre at that same rate?—No, not on the light land; the growing of wheat on light land as shown in my previous evidence was £11 4s. 4d. an acre.

9576. What would you say on similar land?—I should say that none of the land I am farming on this farm "A" would be suitable for small holdings; the small holdings as a rule are on better-class land.

9577. You would not call exceedingly light land better-class land, would you?—I should not call it exceedingly light land probably, but I could not say without seeing it

9578. Therefore, you might not agree with the description that has been given of it?—That is so.

9579. Is there any of the produce of this farm that goes into the house for domestic consumption?—Very little, but anything that has been sent in has been charged at market prices; it is entered up every month.

9580. It is really accounted for in these figures, is it?—Yes.

9581. You could not tell us in what way?—I always charge everything up to the estate or to the hall Departments at the end of every month at market prices and credit the farm with it.

9582. I see you give some figures showing the average profit for 10 years in the case of farm "A" which works out at £260 a year?—Yes.

9583. On the other side you give some further figures showing that is only a fictitious profit and that actually there is a loss when you make the legitimate charges which ought to be made against the farm?—Yes.

9584. You agreed, I think, in answer to a question of Mr. Parker's, that the capital per acre which is needed to work a farm has increased since 1914?—Yes, it has increased.

9585. Can you explain why you take your maximum figure of £10,000 now, and carry it back over the whole of the preceding 10 years?—I have not exactly done that. I have put this little account in here to show the position of the farm to-day. I take it that the profits made in the past are really no criterion of the profits which may be made in the future. What I wanted to show you was that if a man went into that farm to-day he would want £10,000 capital, and he would have to pay a rent of £344, and to pay the rent and interest on his capital he must do considerably better than we have done. He would have to make £844 a year to make both ends meet.

9586. If you take the capital required as of to-day you have also to take the returns as of to-day. If you were to take the last four years since 1914 that would give you a far better average than the average you bring out of £260?—It would.

9587. Therefore, I suggest to you that it is a most unfair proposition to carry that £10,000 capital back over the 10 years, when 10 years ago possibly the capital needed was only about half that sum and the rate of interest less?—I do not know about that, because the profits this year, as far as we can see at present, are likely to be nothing. The expenses are very much higher then they were last year, for instance.

9588. When these charges have been made that does not show this year to be different from any other year, because every year up to the last of the 10 when these charges have been made against the farm there has been no profit, there has been a deficit, and I am just wondering how far these figures may be compiled on a similar basis to that which you have taken with regard to this capital of £10,000, carrying it back over the 10 years, when 10 years ago the capital was not more than £5,000, perhaps, and the interest probably only 3½ per cent. I suggest to you that this Summary of Profits, therefore, is not of much value?—I think it shows the position of a man entering the farm to-day, which, I take it, is what you want to get at.

9589. I suggest to you that if you take the capital which would be required to-day, you cannot go back to these years from 1909 to 1914 and compare the position now with the position at that time, and particularly so if you take out those two very bad years 1911 and 1912, which were exceptional years and, in so far as their characteristics were concerned,

years which would only recur, perhaps, once in 30 years, and in that way you get a different state of things presented?—You mean I ought to have taken the last four years and averaged the profit out on the £10,000 capital?

9590. Yes, when you are averaging the profit for 10 years, I suggest to you that the proper thing is for you to average the capital employed in the farm during those 10 years and also to average the rate of interest?—Yes, I see what you mean, but if you take the last four years, the profits are what I should call war profits.

9591. Yes, and the capital also is a war position?—Yes, but it takes that amount of capital to-day to farm the farm, does it not?

9592. I am not disputing that. I only say you are carrying back over 10 years a figure which is only of to-day's application?—Yes.

9593. *Mr. J. M. Henderson*: I do not understand some of your figures. I have taken out the average of your Farm D, which is a mixed-soil farm, and for the first six years—from 1909 to 1914—the average profits are £788, and for the next three years they are £1,645?—A good deal of that arises from the fact that at the outbreak of war there was a large amount of stock on the farm which was realised at war prices.

9594. At all events that would not appertain to the year 1916-17, would it; you would have sold it by that time, would you not?—We continued breeding, you see.

9595. At all events that is the position. According to your figures, if the land is let at £350 and £7,000 is the capital, the farmer would want to make a profit of £700 to clear himself?—That is right.

9596. You have said that on page 6?—Yes.

9597. But he has not made that; he has only made £402, according to you. I am talking of Farm C now?—You were talking of Farm D before.

9598. I will come to Farm D in a moment. In the case of C the average profit for six years is £402?—That is the net profit we made until we let the farm, only there is £250 rent to come off that—there is the Schedule "A" assessment to come off, which is £250.

9599. That leaves £152 profit?—Yes.

9600. Yet you say that in order to make ends meet it must yield a profit of £700, rent £350 and 5 per cent. interest on £7,000 capital, £350?—Yes, that is right.

9601. Then the man is losing money?—Unless he is making more profit than we did, he is.

9602. When that man came to take that farm off your hands, you could not have shown him that you had made a pennypiece of profit during all those years?—We showed him the balance sheets, that is all.

9603. You could not have let that farm in 1915 to a new tenant at £350 a year when, as a matter of fact, all those years you had not made a pennypiece of profit—however, the figures speak for themselves, and I need not go any further. How do you arrive at £7,000 capital?—That is only an estimate.

9604. What was the valuation of the stock—it is 428 acres, is it not?—Yes.

9605. How do you arrive at the estimate, how do you work it out?—It is just over £15 an acre.

9606. You do not take it from the actual amount of money that the man has got in it?—I do not know what he has got in it.

9607. What did you have in it?—I could not say now, but I should say there was somewhere about £5,000 in it in 1914.

9608. £5,000 is not £7,000?—No, but it would cost considerably more to-day to stock the farm than it would have done then, would it not?

9609. Now take Farm D, that is 1,101 acres?—1,112: it is a misprint.

9610. That has been let to a new tenant in 1918 at a rent of £750?—Yes.

9611. Here, again, to work the farm properly you say a capital of not less than £15,000 would be required, and that an average profit of £1,500 must be made in order to secure the rent and the interest?—That is so.

9612. In this estimate of profit have you put anything for the cost of management?—No, I have not put anything at all down for management.

9613. How much is the cost of management?—I could not say what it cost on that particular farm.

9614. What was the salary of the manager?—I do not think I should state that; why should I state that?

9615. That is part of the expenses?—The manager of that farm had four farms to manage at the same time; he was not managing just that one particular farm.

9616. What was the allocation of his salary to this particular farm?—There was no separate allocation.

9617. Taking it per acre, how much would it work out at?—I cannot tell you at all; there is no charge for management.

9618. On page 5 you say with regard to Farm A: "The profits as shown above have very little relation to the profits likely to be made during the present year or in the immediate future, as costs are much higher than they were in 1918. The labour alone will be increased by about £300 for the present year, and still more for next year"?—That is right.

9619. If a man has to pay £750 a year rent and interest on £10,000 capital at 5 per cent., £750, and wages £300, on your own estimate there is a loss not only of £412 per annum, but of £700 or £800 per annum?—There perhaps may be this year; as I said before, there may be a very heavy loss this year.

9620. Yet this tenant took this farm in 1918 at a rent of £750?—You are mixing the farms up now.

9621. No, I am still on D?—D is £15,000 capital, not £10,000. The tenant of D took the farm in 1918.

9622. Yes, and to pay the interest on £15,000 capital he would have to find £750?—That is right.

9623. The rent is £750?—Yes.

9624. That is £1,500?—Yes.

9625. And the wages will be at least £300 more this year, as you say?—The point about the wages referred to Farm "A."

9626. Yes, but it would refer still more to this farm, would it not?—Yes; I cannot tell you what it would be for this farm.

9627. It would be quite £400, would it not, for labour?—Yes, quite.

9628. That is £1,900, and that would leave this gentleman £800 a year to the bad?—Yes.

9629. Do you suggest that this man, who I suppose is a decent and shrewd enough fellow, would go and pay £750 a year for a farm on which he loses £800 a year?—It looks to-day as if he is going to lose money on it.

9630. It is hardly credible that a man would do that, is it?—If you take the last four years, or the last five years, the profits have been much higher than the average.

9631. The average for the last three years, as I have already pointed out to you, is £1,645?—He has taken it in the hope of making something like that.

9632. £1,600?—Yes.

9633. According to your figures, he has to make £1,500 plus an increase of wages of £400, that is, £1,900, so that he has a considerable loss facing him, according to your figures anyhow?—It looks like it to-day.

9634. Do you seriously want to represent to the Commission that that is the average state of the farming industry throughout the district that you are acquainted with?—No, I should not like to say that.

9635. Are you a representative of the farmers sent to us to show us this terrible state of depression in the farming industry, while at the same time there are other farmers that you know, or might know, who are making more money, and who really could show us a better presentment of the case than you are now doing?—What I was asked to do was to produce the accounts of the "A" Estate, which I have done, for the Farms A, B, C and D.

9636. Why did they suggest the farms on this estate?—I cannot say. When I was up here last time I was asked to produce these figures.

9637. Who asked you?—Sir William Peat, I believe.

9638. He certainly did not ask you to produce these depressing accounts?—He asked me to produce the accounts of the "A" Estate.

9639. Have you any reasonable accounts from other farmers in your district which would induce a farmer to take up farming on any farms in your neighbourhood?—I cannot say that I have at the present day. Farmers do not usually keep accounts in such a condition that they can be produced.

9640. I see in your Summary of Profits in regard to Farm "C" that in 1910 the profit was £726, and that the Income Tax paid was £6. How was that arrived at?—That was the amount of tax on the previous year.

9641. I suppose the £6 would be the tax on the £726?—That was paid on the Schedule B assessment of the farm, which is a third of the rent less abatements.

9642. What was the rent?—I do not know what the rent was; the Schedule "A" assessment was £250.

9643. The gentleman who takes that farm has to face a totally different assessment for Income Tax now?—Yes.

9644. That will increase his loss?—Everybody has to pay increased Income Tax, but if he does not make a profit he will not have to pay it.

9645. Have you made any allowance for the produce consumed off the farm?—Everything the farmer consumed is charged at market prices. The houses on these farms are occupied by the working foremen; there has been nothing credited for them.

9646. You are quite conscious that this is a terrible state of the farming industry which you have represented to us?—It looks very bad; I am quite aware of that.

9647. *Dr. Douglas*: On Farm "A" you return the rent under the payments account as £238, and also down below in your summary you show it as £344. Why do you have these two different figures?—The rent down below is Schedule "A" plus the tithe. The tithe is added on to that. That is how we have to return it to the Income Tax authorities.

9648. So that really it is these two separate figures which make up the sum of £344?—Yes, there may be a little difference in some years.

9649. It is only £319 in the year 1908-9?—Yes. It is more than that if you take 1915-16; the tithe has been going up every year.

9650. You have spoken of the high cost and prices as being the factors that have made it impossible for these farms to pay. Is it not the fact that your worst years of the ten were at the time of lower prices, and that your results have been rather better during the period of higher prices?—Yes; that is partly due to the drought in those earlier years, and partly due to realising stock at war prices in the latter part of the time.

9651. Of course, the circumstances of war have affected both sides of your account, have they not?—Yes, but during part of the time we were short of labour, and we had to manage without. That reduced some of the increased expense, and also in the case of feeding-stuffs, for instance, we could not buy them, and did not spend the money on them.

9652. Therefore, the period of higher prices has proved a better period for you in all respects?—Yes, during the last few years.

9653. *Mr. Rea*: With regard to Farm "A," you have taken Schedule "A" assessment. Do you put that down in lieu of rent?—Yes, in that account.

9654. You are not quite doing yourself justice there, are you, because in Schedule "A" the cost of upkeep is allowed as well as the tithe?—The rent is taken at £344 as an average; there is very little difference; it is just a little bit on the wrong side.

9655. As a matter of fact, your figures for Farm "A" are based upon the Schedule "A" assessment as regards the rental, less tithe, and less 12½ per cent. for upkeep?—The tithe is included in the account.

9656. I am alluding to the upkeep?—The upkeep is not included.

9657. Under the heading you would want to include the upkeep which the landlord and occupier would have to pay. As this farm is in hand he would have to do the repairs himself?—That is how we return it to the Surveyor of Taxes. I might have left that out and put half Schedule "B," which is £344.

9658. There is not very much in that, but lower down you charge the rent at £344 and you estimate the average profits at £260, but in arriving at that £260 you have already charged yourself with the rent under these two items of Schedule "A," the rent and the tithe. I suggest you are charging two rents. Your profit is £260, but to arrive at that profit you have charged yourself with £319 at the beginning of the period and £321 at the finish. If you take the £319 and add it to the £260 you make the actual profit £579 instead of £260. You cannot charge the rent in the Schedule "A" and the tithe. You charge the whole of the £344. That is my point?—Yes, it does look as if it was charged twice. The little table below is to show that if the farm were let to-day at the rent assessed in Schedule "B" the farmer would have to pay £344 rent and £500 interest on his capital of £10,000 at 5 per cent., which would make a total of £844 a year before he got anything for himself.

9659. That is all right; the farmer would have to pay the rent and interest on his capital, but he would not have to pay the Schedule "A" assessment and the tithe?—Yes, that is so; I agree that should come out.

9660. You have either to deduct that from the £344 or add it to the profit of £260, which comes to the same thing?—Yes.

9661. So that the actual profit interest is £580?—Yes, I agree that should be altered.

9662. So that the loss to the farmer is considerably less than these figures show?—Yes.

9663. You said that you pursued a four course rotation on these farms?—Principally.

9664. One year grass, and then wheat after clover?—Wheat or oats—first of all roots, and then barley, and then layer and wheat or oats.

9665. What after the barley?—After the barley will come a layer.

9666. One year's lay?—Yes.

9667. Do you think that is the best way to keep the land clean?—Yes.

9668. Have you ever tried wild white clover?—No.

9669. If you did I think you would find that not only would you keep your land clean but you would grow at least double the corn crops, and in addition you can let it lie for two or three years and so save your labour bill?—We lay a good deal down to lucerne which we leave for four, five or six years as long as it will grow a crop, and then plough it up.

9670. That leaves the land very dirty?—Yes, and then we take two crops of corn, clean it and lay it down again.

9671. Of course, one does not like to speak of a strange county, but it seems to me you would do better both from your own and from the national point of view if you were to alter your system of rotation and try to get rid of this frightful loss which seems to me to be the case. I suppose you as manager organise the work and arrange the cropping and that sort of thing—the foreman only carries out your instructions?—That is right, but, of course, I consult the owner, Mr. "X." He is always about the farms every day. He takes a personal interest in it, and I do it with his assistance.

9672. No part of the accounts includes any of the expenses of your management?—No.

9673. *Mr. Overman*: I know perfectly well that this "A" land is very poor land indeed. The Commission hardly realise how light the land is, do they?—I do not think they do.

9674—5. I put it to you that these "A" farms, like many others in the district, are in hand for the simple reason that they cannot be let?—That is the case, undoubtedly; there is a lot of land like farm "A."

9676. This land is really farmed by the owner because it is not a commercial proposition for any tenant to farm it?—Probably that is so.

9677. You think that as regards light lands such as this, of which we know there are many thousands of acres in the neighbourhood of Thetford, it is a very precarious position for the future?—Yes, the outlook is very bad indeed, and the difficulty is to know what to do with them at the present time.

9678. A great deal has been said about putting it down to grass. You and I know that it has been put down to grass in the past and that the result has been that in two or three years' time it reverts to what we call in our part of the country a sheep walk or a rabbit warren?—Yes.

9679. That was the natural position in years gone by?—That is what used to happen. Of course, in our case we keep the rabbits down; we are very particular about that.

9680. I think Mr. "X" keeps it cultivated, and certainly has done during the war, from a sense of duty?—Undoubtedly, we have tried to keep the land in as good a condition as it was before the war.

9681. The farmhouses, the rent of which I think Mr. Henderson said should be charged to the farm, are practically cottages?—They are used as cottages really because they are occupied by the farm foremen.

9682. They take that position and, therefore, there is no reason to charge anything for the farmhouses?—That is so.

9683. You think that to keep this land in cultivation there must be some guarantee given, otherwise it is bound to go out?—I do.

9684. You know Didlington and Merton and all the light land estates round about there?—Yes.

9685. A great proportion of that land is in hand to-day, is it not?—I have not been there for a long time, but I should say it is.

9686. For the reason that the landlords have to keep it cultivated at a loss?—Yes, that is so; there are a lot of places like that.

9687. Of course, "A" farm is representative of a good deal of the thousands of acres round about Thetford, at any rate?—Yes, and there is a lot of similar land round Swaffham, and other districts as well.

9688. Something was said about the Swaffham smallholdings. You know as well as I do, that the further north you go the better the land becomes?—Undoubtedly. The Swaffham smallholders' land must be a good deal better than the land we farm. I know a good deal of land near Swaffham, which has shown a profit of nearly £1 an acre for some years.

9689. What you mean is that the better lands show a profit under present conditions?—Yes.

9690. But as to this particular class of land, it is a very difficult problem how it is to be cultivated in the future?—Yes, that is exactly what I do mean.

9691. *Mr. Batchelor*: If you look at page 3, at the bottom corner you say, "Extra value to bring up to market value, £4,043." Does that not mean that if you were to realise your assets on these farms to-day you would come out with another £4,043 of profit, in addition to what you have already got?—It means that if we sold up to-day we should probably get that sum, but it is only a profit on paper.

9692. I quite understand. You have 456 sheep in hand, which you value in your balance sheet at £866?—Yes.

9693. You state that these sheep at present market values are really worth £2,052?—Yes, that was the value I estimated they were worth last Michaelmas 12 months ago.

9694. If you had sold for any reason 300 of these sheep it would have made the balance sheet a very much better one?—Yes, but we should not do that, because these sheep are the breeding flock which we must keep on the farm.

9695. Still, the value is there?—If we sold out to-day we should realise a big profit on capital values, but you cannot do that if you are going to continue farming, and if you eventually sell out, the prices may have fallen back to the previous figure.

9696. Unless the values of sheep are going to come down very considerably in the near future, the sheep you sell during the next year will bring you in a very much higher figure than you show in the balance sheet?—We should only sell the worst of them. All the values in the accounts have always been considerably below the market value. Even in 1908 they were put down at less than half probably what they were worth.

9697. Exactly, but still I want to understand whether it is not the case that the profit is lying there for you to take out when you do sell out, unless the prices fall very considerably?—Certainly, unless the prices fall considerably; it is so in any business.

9698. Yes, but it is the case here to such a very considerable extent, having regard to the figures you are dealing with?—I do not think it is to a very considerable extent, when you come to consider the fact that the value of money to-day is less than half what it was in the period when we took these first figures out. Your capital may have doubled automatically, but the money is only worth half what it was previously. It looks a lot on paper; it looks as if you had made a big profit on paper, but you have not, as a matter of fact, made it at all, because it takes double the amount of money to-day to buy the same article.

9699. I am suggesting that you will make that profit if you keep on realising these assets in the ordinary course and if prices do not materially fall?—If the prices do not fall we shall realise a higher value, but that value is only equal to half what it was. You must halve that value to arrive at the actual spending power.

9700. I have nothing to do with the spending power. It will appear on paper that you have made that profit when you go before the Income Tax Commissioners?—That is so.

9701. £1 is £1 so far as they are concerned, and not 10s.?—Yes.

9702. As against that is it not the case that all land is in a very much worse condition now than it was in, say, 1908 from the point of view that there has been a great deal more taken out of it than has been put in?—Most land is in that condition, but I should not say these farms are.

9703. To look at the question of the land charged in each of your statements of the cost of growing an acre of the various cereals on the mixed soil, you put the rental at £1 per acre. How do you arrive at that? Was that the actual rental of the whole farm divided by the number of acres?—No. The wheat would be grown on the best land, which we estimate would be worth £1 an acre to let.

9704. So that the question of any houses on it has nothing whatever to do with it. You have valued the actual fields of land with which the particular crop that you are putting in the cost for deals with?—Yes; no houses go with the farm except the farmhouse.

9705. That is not what I am asking. If you had taken the full rental you could have deducted the rent of the house, but here you have taken the value of the particular field at £1 an acre?—That is right.

9706. Nothing whatever to do with the house?—Nothing whatever to do with the house.

9707. The same in the case of the heavy land where you have put the rent in at £1 10s. an acre?—Yes.

9708. That is in a different district I presume—heavier land?—That is right.

9709. Do you grow any potatoes at all?—Very few. We grew a few some years ago, but they were not successful; the trouble is to get the labour to take them up and to handle them.

9710. Is your land suited at all for potatoes?—We could grow potatoes if we could get the labour to handle them.

9711. *Mr. Ashby*: Is farm "D" a home farm?—No, it is an off-hand farm; it is let now.

9712. What is the reason for the decline in the amount of receipts from poultry on Farm "D"?—We did not keep so many fowls; we gave up keeping turkeys.

9713. Would you look for a moment at these costs of production at the bottom of page 7? You have wheat after clover and then you have roots and then you have barley?—On the mixed soil?

9714. Yes. Which farm would they correspond with here?—They are not based on any of these farms; they are based on the average cost for the mixed-soil land in the County of Norfolk.

9715. You would not compare the mixed soil on which you estimated these costs with the mixed soil on farm "D"?—Farm "D" is a mixed-soil farm, but the costs referred to there only refer to that particular farm and not to mixed soil of the same class in the whole of the county. The estimated cost of growing wheat on that class of land has been carefully gone through by the Committee of farmers with me, and these costs represent what they consider to be the correct estimated average cost for that class of land.

9716. Would farm "D" be representative of that class of land?—It is more inclined to be light land than mixed soil; part of it is very good and part of it is very light.

9717. The estimated cost of wheat production is £14 18s. and for oats £12 16s. and for barley £13 19s.?—Yes.

9718. That is an average cost of nearly £14 an acre?—Yes.

9719. What sort of rotation do you follow on this mixed land—four course?—Yes, the rotation on the mixed soil would be wheat, roots, barley and layer.

9720. So that you have two crops missing here—roots and clover?—Yes.

9721. What would your roots crop cost? Have you any idea of it?—I have not worked that out. It depends upon the class of roots whether it is turnips or mangolds or swedes—it varies so.

9722. Would the cost of growing roots be something like the cost of growing an acre of hay?—Probably more.

9723. Could you tell me anything like the proportion of the number of acres of arable land there are on this farm "D"?—Farm "D" has 626 acres of arable, 146 of pasture and 329 of heath.

9724. Out of the 1,100 acres?—Yes.

9725. There is very little expenditure on the heath, I presume?—Yes.

9726. So that the expenditure is incurred mainly on the 626 acres of arable and the 146 acres of pasture?—Yes.

9727. It is rather strange, when you begin to look at these estimates, to see that you have three crops which average £14 an acre and you say your roots would cost you more than that. Clover would not cost you so much as any of them?—That is so.

9728. Anyhow, you would have an average cost of something like £10 an acre, but your average expenditure in 1916 and 1917 was a little under £3 an acre. If it had doubled between 1916 and 1917 and the present time it would only give you £6 an acre?—That is wrong. The account I have given for this farm "D" is not a receipt and payment account, but the profit and loss account; it simply shows the balance in each case.

9729. Excuse me, it is expenditure on farm "D" on labour, feeding stuffs, corn cake, seed corn, general expenses, tithe, rates and taxes, implements and horses, which are surely the main items that enter into the cost of production on any farm. I do not know any important item that is not included. One would expect that the total cost of production spread over the whole acreage of the farm would somewhat correspond with the figures for 1916 and 1917, but you have to multiply it about four times to get at your present cost of production figure. I want to bring home to you the possibility that there is of very big errors in these estimates of cost of production?—I must say your supposition is not quite correct. The balance sheet I have given for farm "D" is merely a profit and loss account. For instance, there is nothing on the side of expenditure for stock bought. It is not like farm "A" account, which is a receipt and payment account showing the live stock and the corn seeds bought and other things like that; it is merely a posting of the balances to the profit and loss account in the ledger. I did not attempt to get it out the other way, or I should have shown it as I did in the case of farm "A."

9730. When you came here before, you showed us some rather high costs for light land farming in Norfolk, did you not?—I showed you what I considered was the actual cost at the present time.

9731. I am sorry I have not got the figures before me at the moment?—I have them here, if you want them.

9732. Will you tell me the figure for wheat and barley and oats in the case of light land?—Wheat was £11 4s. 4d., oats £7 18s. 1d., and barley £7 18s. 3d.

9733. On page 10 you give a summary of three crops which gives you an average of £9 2s.?—Yes.

9734. If you look at farm "A," which is a representative farm of that character of land, you have got a total payments expenditure in 1917–18 of £4,800 and a total, including the valuation, of £8,239. Your expenditure there is about £6 an acre and your crop expenditure runs you to £9?—Of course, the average per acre would be less than £9, because it does not cost so much for the seeds, for instance.

9735. Yes, I admit that. Would you turn to the cost of production, on page 7? Take first wheat: what place would this crop of wheat take in the rotation?—That is the mixed soil?

9736. Yes?—The wheat would come after the layer in most cases in the mixed soil.

9737. That is the fourth year removed from the fallow—from the root crop?—The third year from the root crop—three years after the root crop.

9738. How do you get at the £1 10s.?—I estimate the proportion of the cost of cleaning the land—for the root crops that should be spread over the other crops—at £6 an acre.

9739. The root crop, as a matter of fact, in this case was a 1917 root crop, and if you are costing for this year's wheat crop do you divide it equally between the three or four following crops?—I take £1 10s. for the wheat, £2 10s. for the barley, and £2 for the layer as the cost of cleaning the land; the other portion of the cleaning would be borne by the root crop.

9740. How do you value the farmyard manure?—I put it in at 5s. a load.

9741. What is the 5s. for?—The manurial value of it.

9742. The manurial value of what?—Of the farmyard muck.

9743. Is it from the purchased feeding stuffs?—Yes, it would be, principally.

9744. Are you sure about that?—Partly from that and partly from roots consumed on the farm.

9745. Any straw?—Yes, the straw is included in the muck, but I have not included the value of the straw in that. If I had included the value of the straw I should have put it in at more than 5s. a load. I left the value of the straw out on both sides.

9746. You have a long list of operations here; is it your practice to carry out all these operations?—We should, in the ordinary way, to farm properly and to keep the land clean.

9747. Again I am a little bit troubled about them, because, for instance, you do not get any amount of labour employed on land of this character. If you take your first farm, you have 16 men and women and boys employed on over 1,000 acres, and I rather think they could not carry out all these operations?—There are only 506 acres of arable on the farm.

9748. That gives you just over three workers to the 100 acres?—Yes.

9749. In that case you could not handle all those 500 acres with only three per 100 acres?—We have not been able to do it lately, but I thought on working out the estimates that it was only correct to work them out having regard to how the land can be kept in proper order and the cost of producing corn under proper conditions.

9750. **Is it not your experience that there has been a very large tendency on the part of farmers generally to stop hand weeding?**—There is, with the result that the land is in very bad condition.

9751. **Have you seen any of it being done again?**—**Yes, a good deal of hand work has been done this year, spudding thistles and pulling docks.**

9752. **That would not cost you 15s. an acre?**—**No, but before the war we always used to hand hoe the wheat in the spring.**

9753. **Before horse hoeing?**—**No, after horse hoeing.**

9754. **You horse hoe and then hand hoe and then weed and spud thistles and pull docks?**—**The man who did the horse hoeing probably would not hand hoe; he would only do the weeding. But I should say it is more usual now to leave out the horse hoeing and do a bit of weeding.**

9755. **I should have thought that it would have been more usual in your case to leave out both the horse hoeing and the hand hoeing and put down 3s. to 5s. an acre for weeding?**—**No, it would cost more than that. We always used to horse hoe the land or else hand hoe it for wheat and a little before harvest we should do a considerable amount of weeding and spudding thistles and pulling docks, with the exception of the last year or two when we could not get the labour.**

9756. **I suppose you have no means of checking these estimates of cost of production with the actual recorded expenditure upon these farms?**—**No, I have not detailed costs accounts.**

9757. **You have no means of getting a rough check on them even?**—**Yes, I have, because I know what a man does in a day.**

9758. **So do I, more or less, but I always feel very dissatisfied after a person has put down a number of operations because you can never be sure that he has carried them out. If you work a four course rotation on land of this character horse hoeing and hand hoeing with even very little cultivation before those processes your land ought to be like a garden. Is it?**—**It is hardly like a garden, but I should think it is as clean as it was before the war.**

9759. **You have ploughing and rolling and harrowing twice. That is spring harrowing, I presume?**—**Yes.**

9760. **And rolling and hoeing and weeding and spudding thistles and pulling docks. One would have thought after all those operations that there would not be a thistle to be seen that would want spudding?**—**There are generally a lot of thistles that will come up, and the land has been allowed to get in such a bad state that it will cost a considerable amount of money to get it into order again on most farms.**

9761. *Mr. Cautley*: **You might tell me how long you have been farming?**—**Twenty years this year on these farms.**

9762. **Have you been agent for them all the time?**—**Yes.**

9763. **You have been responsible for the direction and arrangement of the cropping and of the various operations which have been carried on all the time?**—**Yes, with Mr. "X's" assistance, of course.**

9764. **Before that were you a farmer?** I was the son of a farmer, I was not farming before that, but I had a course of instruction in farm accounts with an accountant.

9765. **I ask you because I want to know whether this land has been farmed as well as land can be farmed from a practical point of view?**—**I should say I have farmed it under Mr. "X's" direction—put it in that way if you like—and he is a practical farmer.**

9766. **And you are a practical farmer?**—**Yes, I am a practical farmer at the present time. I do not know any landlord farming in Norfolk who knows as much about farming as Mr. "X."**

9767. **This evidence is put in by you on behalf of the Norfolk Chamber of Agriculture and the Farmers' Federation, Limited?**—**That is so.**

9768. **Is that the farmers' body for Norfolk?**—**It is one of them; there is another one.**

9769. **This is different from the Farmers' Union?**—**Yes. The Farmers' Union are also going to put in figures.**

9770. **You represent the Norfolk Chamber of Agriculture?**—**Yes, they asked me to collect evidence and figures on their behalf.**

9771. **They selected you to do that and to give evidence here?**—**Certainly.**

9772. **You have given us accounts in respect of four farms, A, B, C, and D?** Yes.

9773. **Are each of these farms Mr. "X's"?**—**Yes, they are the ones in respect of which I was asked to produce the figures.**

9774. **Each of them has been under your management for all the years in respect of which you give figures?**—**Yes.**

9775. **The figures, I gather, are taken from actual books which have been audited?**—**Yes.**

9776–7. **Take Farm A. What was done in arriving at the valuations—were they valued by you?**—**Yes. I have always made the valuation every Michaelmas.**

9778. **Taking your horses, for instance, do you appreciate them, or do you depreciate them, or do you value them as they stand, or do you leave them as they stood in the books?**—**In the ordinary years until last year we have always taken them as they stood in the books, and added on any horses that have been bought.**

9779. **At cost price?**—**At cost price, and then that has been reduced the next year. The result of that is that the figures always stood at less than half the market value.**

9780. **We have not got it quite clear yet. Take your existing horses at the beginning of the year. they stand in your books at a certain price?**—**Yes.**

9781. **Your work horses I am talking of?**—**Yes.**

9782. **You take your horses at the beginning of the farm year at a certain price, which is put down in the valuation?**—**Yes.**

9783. **At the end of the year do you take them at the same figure as they stood at before?**—**Yes, in the ordinary way—the working horses.**

9784. **You do not take any depreciation off?**—**The depreciation comes off the new horses that are brought in; the old ones will probably stand at the same figure.**

9785. **Supposing you have ten horses standing at £50 apiece, do they stand in the books at the same figure each year until they are sold or die?**—**They do.**

9786. **Your old horses all stand in the books at £50?**—**Not as high as £50, but at a nominal figure like that; some are worth more and some are worth less.**

9787. **Supposing you buy in one at £60?**—**That is taken the first year at £60, the second at £40, and the third year it is put in at the same value as the others.**

9788. **Then you do not write them down any more?**—**No, they stand at that figure.**

9789. **Take your cattle?**—**The cattle have been taken as near as possible at market value.**

9790. **An individual valuation by you?**—**Yes, at the time of the valuation.**

9791. **You value them every year?**—**Yes.**

9792. **You have been asked about the sheep already?**—**Yes, they were taken at a nominal value.**

9793. **Do they stand at the same value each year?**—**They were depreciated 1s. or 2s. apiece every year for a number of years until the early part of 1914, and they have stood at that figure since; they have not been depreciated any more. The rams that we bought have been taken at cost price.**

9794. **What do you do with regard to the implements?**—**They have been reduced 10 per cent. every year.**

9795. **And you add the cost of the new ones?**—**We add the cost of the new ones less 10 per cent.**

9796. **That has been each year?**—**Yes.**

9797. **Does the tenant right stand at the same figure each year?**—**The tenant right has been excluded—that is to say, any cultivations have not been put down.**

9798. **You leave that out?**—**Yes.**

9799. **Now the roots?**—**The roots were taken at a more or less average figure every year.**

9800. **The same price every year?**—**Not the same price, but at a low figure, much below cost price.**

9801. Do you vary the price each year?—According to the crop; I should not take them at more than half the market value.

9802. You take the roots at half the market value, but you make a separate valuation each year?—That is right.

9803. What do you do about the hay?—That is all taken at consuming value on the farm.

9804. Does the consuming value vary or not?—It has done recently.

9805. I want to know what you are doing?—I have taken the hay at the same price every year in these accounts.

9806. Is the hay put down in 1918 at the same price as in 1914?—The same price per ton.

9807. In that last column of the Capital Valuation Farm "A," taking hay as it stands at the 1918 Michaelmas valuation at £263, and at the value at present market prices, £825?—Yes.

9808. Is £825 the present consuming price?—Yes. £825 is the value on the farm. A great part of the hay was taken over by the Government, and it was put at the value that it stood at on the farm.

9809. I do not understand what that means. What price does the £263 represent for the hay at Michaelmas, 1918, in your balance sheet?—That represents 30s. a ton.

9810. The present market value is £825 you say?—The present market value varies from £4 to 5 guineas a ton.

9811. Is that what you call the consuming value of the hay to-day?—No, that is the value last Michaelmas, which is quite different.

9812. You have got "Value at present market values." Does that mean at Michaelmas, 1918? Yes; of course, it has gone up since then again.

9813. I only want to get at what your figures mean. You have given us here the total value at Michaelmas, 1918, as it stands in your books?—Yes.

9814. That shows £263 for the hay which you tell me represents 30s. a ton?—Yes.

9815. In the last column you have "Value at present market values"?—That should be "consuming value at market prices in October, 1918."

9816. £825 you say represents the value of the hay, taking it at about £4 10s. a ton?—That would be about the average—just a little more than that.

9817. How do you value the corn: do you value it each year?—Yes.

9818. You estimate in the stack what it will be likely to realise?—What we estimate it will be likely to realise as corn at the market price.

9819. You then add the floating capital and you add the extra value to bring out the present market value?—That is the difference between the two columns.

9820. On the whole it has already been pointed out that both on the hay and the sheep, at any rate, you do stand a good deal better off than your figures show?—Yes, if we were to realise now.

9821. Would £12 a ton as the consuming value of hay be out of the way at the present moment?—No, probably not to-day.

9822. You have got out figures here showing a comparison of prices—I think you did this in answer to a question of mine showing a comparison of prices in the years 1914 and 1918 and 1919 of a number of articles which are set out on page 7?—Yes.

9823. Are those taken from your books?—Some are. In most cases they are taken from the figures which have been supplied to me by the Eastern Counties Farmers' Co-operative Society.

9824. These are prices which you have ascertained?—Yes, unless I actually paid them.

9825. You cannot tell us which you have actually paid and which you have ascertained?—Hardly, just now.

9826. I do not want to go through them in detail at the moment. Is the Eastern Counties Farmers' Co-operative Society a very large society?—I believe it is the largest farmers' co-operative society in England.

9827. The prices they gave you would be the prices that are paid by farmers in Norfolk?—Certainly.

9828. The very best way you could buy these articles?—The very best way you can buy them, yes.

9829. Are your 1919 prices the prices the farmers were paying at the time these figures were supplied to you?—Yes.

9830. Can you tell me what part of 1919 the figures refer to?—Up to about a fortnight ago; it would be to about the end of August, 1919.

9831. The last column of the comparison of prices refers to the last week in August, 1919?—Yes.

9832. That shows the increase as from 1914?—Yes. There is a considerable alteration in some of the items already, for instance, the horse shoeing has gone up from 7s. 6d. to 9s. I saw that in the paper this morning.

9833. Have these figures been seen by the Norfolk Chamber of Agriculture?—Yes, they have seen them all, I think.

9834. Do they agree with them?—I should hardly say the whole of the Chamber. The costs of production have been gone through by the Committee of Farmers.

9835. I am referring to the prices?—They were seen by the Committee of Farmers for whom I am working. It is the Farmers' Federation, as a matter of fact; I do not think many members of the Chamber were there.

9836. The Farmers' Federation saw these figures before they were printed, and they agree that they are right?—Yes, they helped me to get some of the figures.

9837. You have also given the cost of production of one acre of wheat on the heavy and the light and the medium lands in Norfolk?—Yes.

9838. Have those figures been seen and investigated by the Committee of the Farmers' Federation?—Yes.

9839. And by the Norfolk Chamber of Agriculture?—No, not by the Chamber of Agriculture.

9840. Could you tell me how many members the Farmers' Federation consists of?—I cannot give you the numbers of members, but I can tell you that they represent 600,000 acres of arable land.

9841. What do you mean by represent?—The farmers who are members of this Federation themselves farm 600,000 acres of arable. I cannot tell you how many members there are, but I should think perhaps about 2,000.

9842. As many as 2,000?—I should say so, probably.

9843. The Committee appointed by them have seen these figures that you have put before us?—Yes.

9844. Do they agree with them?—Yes.

9845. How many members does the Committee consist of?—There are eight or nine, I think, on the Committee.

9846. Are they an elected Committee by the rest of the members?—Yes; they were chosen by them.

9847. Whether the prices are right or wrong, are they the prices which are recognised by the farmers?—Yes, in most cases. They went through the lists with me of the cost of production very carefully, and they instructed me in preparing them, as a matter of fact. After I had got my figures together I asked them to give me their opinion with regard to them and to criticise them, and if I was wrong in any case to put me right.

9848. Do these figures that you have put here agree with your practical experience of what you had to pay for similar operations?—Yes.

9849. What the cost has been to you of those similar operations?—Yes.

9850. It has been suggested that some of these operations are unnecessary for proper farming. What I mean by proper farming is sound commercial farming. Are they necessary or are they not?—I should say they are all necessary to farm your land properly and keep it clean; as a matter of fact, they would not perhaps all be done.

9851. Weather may prevent some from being done and time may prevent others?—Yes, and you might want to plough your land again in some cases.

9852. Yes. I was going to point out there is only one cost of ploughing here in the mixed soil?—Yes, we should only plough it once for wheat.

9853. Are you able to tell me what the labour cost of producing an acre of wheat is?—I worked it out on the light land in my previous evidence. I have not taken it out in the case of the others. The cost of the manual labour in the growing of one acre of wheat was £3 6s. 4½d.

9854. Is that £3 6s. 4½d. the cost of the labour on the production of an acre of wheat on light land, which on page 10 is quoted at £11 4s. 4d.? Yes.

9855. You did not give us details of that before?—Yes, that was in my first evidence.

9856. I have not had an opportunity of reading it yet. Does that £3 6s. 4½d. include the cost of labour of the carter in ploughing and in harrowing and that sort of thing?—Yes. I have taken that out and shown it particularly.

9857–8. Everything?—Yes.

9859. Have you got that for the cost of wheat on the mixed soil or the heavy land?—No. I have not worked it out in the case of the others.

9860. I shall find in the evidence the full details?—Yes.

(The Witness withdrew.)

Professor R. G. WHITE, Manager, University College Farm, Bangor, called and examined.

9861. *Chairman*: **You have handed in balance sheets of the farm of the University College, Bangor?*** —Yes.

9862. And also a *précis* of the evidence you propose to give?—Yes.

9863. Really an extension of the accounts?—That is so.

9864. May I take those as part of your evidence without reading them?—Yes.

Evidence-in-chief handed in by Witness.

(1) The College farm is maintained primarily for purposes of experiment, demonstration, and educational purposes, but with the exception of comparatively small Government grants it receives no financial assistance from outside sources, and is therefore managed to a great extent on commercial lines. Any surplus on the working of the farm is used either to improve the stock and the farm itself, or to carry out further experimental work. The present farm was taken over in November, 1910. It is held on a 35 years' lease, and at the outset about £2,500, provided for by a loan from the general College account, was spent on improving the buildings and erecting cottages.

(2) The farm was not in good condition when taken, and up to the outbreak of war, a good deal of labour and money, which cannot be separated from ordinary expenditure, was spent on cleaning land, improving fences, gates, roads, ditches, etc. During the war this work had to be neglected and the farm is not nearly in such good condition as in, say, 1915, though the whole of the improvement has not been lost. The cost of labour, fencing material, etc., necessary to raise the condition of the farm has, however, risen to such an extent that, allowing for this, it is probably safe to say that the general condition of the farm, regarded from a financial point of view, at the end of the year 1917–18 was not very different from that in 1910. This, of course, does not apply to such permanent improvements as erection of buildings and draining, the expenditure on which is shown in the accounts.

(3) In considering the accounts, it is also necessary to remember that no charge is made for interest on capital, which on pre-war values might be taken as about £6,000. Also, nothing beyond the rent of his house and an allowance of dairy produce is charged against the farm for the services of the Professor of Agriculture, who lives in the farm house and devotes a considerable part of his time to the management of the farm, including all the buying and selling, or for the services of the clerical staff of the Agricultural Department, who are responsible for the keeping of the farm accounts.

(4) It is necessary ,also, to explain the valuations. Most of the stock on the farm is pedigree stock of fairly high quality, but the valuation before the war was based on the value as ordinary commercial stock, and an ample margin was left to cover risk and expenses of marketing. When values rose as a result of the war, it was decided to keep the valuation as far as possible at the same low level. For instance, the cows in the dairy herd were valued in 1918 at £18 each. An exception to this is made in the case of produce, corn, wool, etc., which is certain to be disposed of at about current market prices.

(5) During the first two years of the tenancy, very little experimental work could be attempted, on account of the disturbance caused by changing from one farm to the other. Allowance is made for this in the summary which follows. Owing to the shortage of labour and the necessity of securing the maximum production of food, no experimental work could be conducted in 1918, and the annual grant of £200 from the Board of Agriculture was discontinued in that year. In other years it may be assumed that the Government grant approximately covered the cost of experimental work, though probably the farm, regarded as a commercial undertaking, was out of pocket by a small amount each year.

(6) The following gives the size of the farm, together with a rough allocation of the rent (£629), including rates (£66) and sinking fund contribution on loan from College (£132), the actual rent paid to the landlord being £431.

265 acres low ground at 32s. 6d. ...	£429
400 acres enclosed hill grazing at 6s. ...	£120
Right of grazing 860 sheep on open mountain	£80
	£629

The low ground is nearly all cultivable and most of it is cultivated in turn. Since 1915 about 100 acres have been under plough each year.

SUMMARY OF RESULTS.

		£ s. d.	*Deficit.* £ s. d.	*Surplus.* £ s. d.
1910–11	Net deficit as shown in accounts	444 6 4		
	Government Grant	200 0 0		
			644 6 4	
1911–12	Net deficit, as shown in accounts	533 6 2		
	Part Government Grant	100 0 0		
			633 6 2	
1912–13	Net surplus, as shown in accounts	94 9 11		94 9 11
1913–14	.. ..	115 7 8		115 7 8
1914–15	.. ..	49 12 2		49 12 2
1915–16	.. ..	649 1 2		649 1 2
1916–17	.. ..	590 4 7		
	Special repayment of Loan	500 0 0		1,090 4 7
1917–18	Net surplus as shown in accounts	£483 7 7		
	Capital account transfer...	485 10 4		
	Special repayment of loan—			
	£1,220 17 5			
	132 2 0			
		1,088 15 5		2,057 13 4
			£1,277 12 6	£4,056 8 10

* *See* Appendix II.

SUMMARY OF RESULTS—*continued.*

	£	s.	d.
Total surplus	£4,056	8	10
Total deficit	1,277	12	6
	£2,778	16	4
Appreciation in value of farm due to permanent improvements, buildings, draining, &c.	500	0	0
(£552 on 30 years' basis—3 run)			
	£3,278	16	4

This leaves about £400 per annum to cover interest (on about £6,000), clerical work and management expenses.

Some explanation of the deficits in the earlier years and the apparently large surpluses in the last two years is necessary.

(7) During the first two years considerable sums of money were spent on the purchase of pedigree stock and on general improvements of such a character that the full benefit has only just been realised. For instance, in 1910 and 1911 over 50 tons of basic slag were used on the farm. In 1910–11 cattle which appeared in the valuation at £324 were purchased at a cost of £572, while in 1911–12 four pedigree cattle which appeared in the valuation at £81 were purchased at a cost of £280. The benefits of these purchases are just beginning to be realised. For instance, in 1916–17 pedigree breeding stock, mostly bull calves, to the value of £250 were sold, while in 1917–18 seven bull calves and one bull were sold for a total of £490.

(8) The following table, showing the sums spent on feeding stuffs each year, is also relevant as indicating that in 1918 reserves accumulated during previous years were to a large extent realised:—

Feeding Stuffs.

1910–11.—£297 15s. 4d., plus all the home-grown grain.

1911–12.—£521 0s. 0d., plus all the home-grown grain.

1912–13.—£430 8s. 2d. } and practically all
£56 3s. 8d. } the home-grown grain.

1913–14.—£582 9s. 0d., and practically all the home-grown grain.

1914–15.—£661 8s. 2d., and greater part of the home-grown grain.

1915–16.—£695 13s. 0d., and greater part of the home-grown grain.

1916–17.—£621 18s. 7d., and greater part of the home-grown grain.

1917–18.—£121 15s. 7d., and only a small proportion of the home-grown grain.

(For the Accounts referred to *see* Appendix No. II.)

[*This concludes the evidence-in-chief.*]

Chairman: Then Mr. Smith will begin questions.

9865. *Mr. Smith*: You state in the first paragraph of your *précis* that a great deal of money was spent in the early years on improvements, and I take it that is all in the balance sheets of those years?—That expenditure is included in the balance sheets, but not specified separately.

9866. You suggest further that during the last few years this work has been somewhat neglected, so that the position now practically is the same as in 1910, or not much different?—Yes, that is so, from a financial point of view. I ought to point out that this is allowing for the extra cost of carrying out such work at the present time.

9867. I rather gathered you came to the conclusion, after making a due allowance for the high cost of material that may have to be used for fencing, and so on?—Yes.

9868. On the balance sheets as a whole, do you suggest from a commercial point of view there is a loss or a profit?—I think that is shown, if I may say so, in the summary which is given in my *précis*.

9869. Therefore, if due allowance was made for interest on the £6,000 and clerical work and management expenses, there would be a deficit?—It depends of course on what rate of interest you allow. I mean, if you allow 5 per cent. interest for the whole period, they just about clear themselves.

9870. In regard to your valuations, I notice you state here that you valued your cows in the dairy herd in 1918 at £18 each?—Yes.

9871. Do you suggest that is a fair figure to put in?—Of course it is very much lower than their value at that time. I do not know whether you have any experience of farm accounts; but so much in farm accounts depends on the valuation, and we have adopted the policy of keeping the value (in our valuation) of different classes of stock at about the same each year, provided that they are of simliar quality. That seems to us to be the only fair way if you are to avoid what you might call fictitious profits and losses each year.

9872. But you state that the stock on the farm is pedigree stock of fairly high quality. Would not that mean that to purchase these cows in the market you would have to give nearly three times £18 each for them?—I should be glad to think I could get some of them for three times the value.

9873. You would be fortunate if you could get some of them at three times the value?—Yes.

9874. Would the amount of your stock be equal, or about equal, to what it was in 1911?—Yes, about equal.

9875. Then there has been very little appreciation in the value of the stock as between 1911 and 1918. your figure in 1911 was £5,472, and in 1918 it was £6,860?—Yes.

9876. So that there are other things besides cows, the value of which has been kept down?—The value of what you might call permanent stock, not merely the cows, but also the breeding flock of ewes and that sort of thing, is kept at the same figure or about the same figure each year so long as the stock are about the same quality.

9877. Do you consume on the farm a great deal of the stuff you grow?—That I think is shown in paragraph (8) of the *précis*. In the earlier years we consumed all the home grown grain; but during the last year or two we have sold an increasing proportion of the home grown grain. Every year straw, roots, and food of that kind, except quite trifling quantities, is consumed.

9878. That produce costs you more to grow to-day than it did in the earlier years?—Yes.

9879. Do you think it is fair, after having fed stock on produce that costs you a great deal more to grow, that you should still value your stock at the same price as you did in the earlier years?—That is rather a debatable point. Perhaps I might explain the object of this. The alternative would be to value the stock each year at about the current market price. But, take for instance, our flock of ewes. We have, say, 600 ewes. We value these, say, this year at £2 each. Next year the market may break or it may rise, and they would be valued at a very considerable difference showing either a profit or a loss, but actually there would not have been either a profit or a loss made. We have the same flock of ewes. We cannot sell them or else we cease being sheep farmers.

9880. But there is a difference, is not there, in taking the full market value of your stock and keeping them down at the figures you have put in here?—There is; but it is a question where you are going to draw the line. Of course it can be argued both ways; but we have adopted that policy as being

the safest. Our authorities want to be sure that the accounts do not at any rate overstate the case, and you are certainly absolutely safe in adopting the policy we have taken.

9881. I agree it is a very safe policy. The point is as to whether or not it is correct only to value your stock at the same figure, whilst you know that their actual value by virtue of the cost of the fodder which they are consuming must make them worth more and keep them worth more whilst the cost of the produce keeps up?—There is always this to be taken into account, that every year a good proportion of the stock is sold and you reap the benefit of the increased costs of your feeding stuffs in that way. I think it is about as broad as it is long.

9882. You do not represent the full value and the increased value of your feeding stuffs whilst the value of your stock keeps down to the pre-war level?—At any rate it is quite easily possible, if you understand the system of valuation, to make the adjustment yourselves.

9883. What I would suggest to you is that if there were not, if not the full market value, what one might term a reasonable value placed upon the present stock, this farm might show a reasonable profit?—Quite possibly.

9884. Do you not think that the experimental side of the farm would cost more than you get in the way of grants?—I have indicated that I think it probably does; but it is difficult to assess the cost of experimental work, and as well as one can say it is not far off the mark. I do not think the excess cost is very great.

9885. Have you formed any ideas or opinions as to what is necessary in regard to the future of farming in this country in the way of a policy or anything of that sort?—I have not really come here to go into that; and unless there is any definite question on which my opinion might be of advantage to the Commission, I would rather not go into it.

9886. I do not want to press you on that point. In the working of the farm have you formed any opinion as to how farming might be helped by improved facilities in any way, say, of transport or things of that description?—Our own farm is so favourably situated on a main road and close to a station, that, of course, the lack of transport does not affect us directly.

9887. Therefore, you express no opinion on the general position?—No.

9888. *Mr. Robbins*: To what extent would you say that this farm is typical of other commercial farms in the neighbourhood?—I should say it is very typical of similar farms in hill districts. We have both low ground and enclosed hill ground, and then a big run for sheep on the open mountain.

9889. Are the sales in pedigree stock included in these accounts?—Yes, all of them.

9890. Therefore, the accounts would benefit by the low valuation when sales take place?—Exactly.

9891. It is as broad as it is long, on whatever basis you take a valuation, so long as you maintain an even basis?—Yes, that is so.

9892. *Mr. Parker*: How much of your farm is under the plough, that is, arable land?—About 100 acres during the last two or three years. Last year we had 120 acres.

9893. What is that under—wheat?—No, we work on a rotation. The land is ploughed out of grass. We take a crop of oats, on part of it a second corn crop, then roots, oats, and then it is seeded down again. We grow very little wheat. Oats are our staple corn crop.

9894. Do you keep any costing accounts?—No, I am sorry to say we do not.

9895. Then you cannot tell us what is the cost of the production of an acre of wheat?—It would be merely an estimate, if I did. It would not be based on proper costing accounts.

9896. You lost money up to 1912, and then came the turn of the tide?—Yes.

9897. The following year shows a profit. Is that the general experience in Wales, do you know?—I do not think so.

9898. Or was it your initial expenditure handicapping you?—Very largely the initial expenditure resulting from the change of farms.

9899. *Mr. Nicholls*: Is it heavy clay land?—A part of the low ground that we cultivate is rather wet heavy clay. I would say about half of it, or perhaps a third of it is. The rest is a medium loam, changing in places to a gravelly loam.

9900. Is it two horse or three horse?—It is all two horse land; but some of it is heavy two horse land. We very seldom do so, but we put three horses in the plough occasionally.

9901. But it is mostly a grass farm?—Only about a third of it as a rule is under the plough.

9902. About 675 acres altogether, is it not?—When I said about a third of it under the plough, I referred to the low ground, that is, the cultivable ground. 400 acres out of the 675 are enclosed hill grazing, rough and hilly and unsuitable for ploughing.

9903. And the rent is £629; that is about £1 an acre?—The rent is shown in paragraph (6) of the *précis*.

9904. That is less than £1 an acre, taking it as a whole?—Yes. You will see there is a big difference. The rough grazing is assessed at 6s. an acre, and the low ground at 32s. 6d. That is as near as I can say.

9905. What number of pupils do you have on an average?—During the last two years we have not had any. Previous to that it would average about 40. In the session which is just starting, we shall have a great many more.

9906. Are they young men who come with scholarships, farmers' sons, or what type of men are they?—Mostly farmers' sons. That is the class we aim at getting hold of.

9907. And they pay fees, I suppose?—A great many of them hold scholarships from the County Councils which cover the fees. Of course, they do not cover the whole of the expense.

9908. Do they work as ordinary workers when they come to the farm?—Practically not at all. We want to teach them something they cannot learn at home.

9909. How many workpeople have you on the farm?—It has varied very much the last year or two. At the present time we have about ten men and two or three women.

9910. *Mr. Lennard*: Is it your experience in the past that your pupils go back to their fathers' farms?—The majority of our students have done.

9911. Have you noticed any sensible improvement in agriculture following this education?—It is always very difficult to measure the effect of educational work, but I think we may say that there has been an improvement.

9912. Do they come mostly from your own locality or from other localities?—Mostly from North Wales.

9913. Would they be mostly from farms of a similar character to your own hill farm?—They vary very much; but I think we may say very similar farms, though much smaller farms as a rule. Ours is a large farm for North Wales.

9914. Do you find that old pupils come back for advice after they have set up farming for themselves?—Yes, I may say they keep in pretty close touch with us.

9915. Do you do much research work on the farm?—A certain amount; but not nearly so much as we should like to do, and not so much as we hope to do. Our staff up to the present has been very limited, and they have been fully occupied in teaching, organising, and that kind of thing. But now we have enlarged our staff very considerably, and we hope to do much more research work.

9916. Do you do anything to assist farmers in the neighbourhood in the way of soil analysis and manures?—Yes.

9917. Do you find that they are getting more ready to take advice on those lines?—Undoubtedly, and I think particularly so since the outbreak of war.

They have been faced by new conditions and new difficulties, and they have come more readily to our staff for advice than ever before.

9918–19. You look forward, do you, as a result of educational progress, to considerably levelling up farming efficiency?—Yes.

9920. *Mr. Langford*: Your farm is mainly for experimental and educational purposes?—That is its primary object.

9921. Do you find that farmers' sons and others take readily to the tuition you are prepared to impart?—Yes, the majority of our students are farmers' sons.

9922. And their interest is keen?—Very keen.

9923. Is it your experience that if there were a great many more of these farms in the country, it would be a lasting benefit to agriculture?—I would not like to say a great many more; I would like to see a certain increase. But what is needed more than anything else, I think, is better equipment and staffing of those that do exist already.

9924. I agree with you. In other words, the Board of Agriculture or the Government ought to be more liberal in the way of grants and so on to the various experimental farms?—That is so.

9925. But I think you would agree there ought to be one in each county, would you not?—It depends on the counties. In the case of very small counties you might have a grouping; but certainly one in every fairly large county or in groups of small counties.

9926. It may not be necessary to have one in each county in Wales, but in the more fertile land of England it would probably be necessary?—I am speaking for Wales.

9927. You think, at any rate, that there are not too many at the present time?—No, there certainly are not.

9928. And there is room for great extension in that direction?—I do not want to see the number so increased that each of them is starved. A certain extension is needed; but the number should not be so large that if the amount of money available is limited, each is starved when it is established.

9929. Do you agree that farmers would benefit very greatly by a better system of agricultural education?—Yes, undoubtedly.

9930. *Mr. Prosser Jones*: You took this farm in 1910, I think?—Yes.

9931. It was then in a very bad state?—I do not say it was in a very bad state. I say it was not in good condition. I would not like to say it was an outstandingly bad farm, but it was not in the condition we should like to have it.

9932. It was in that state that you were unable to make anything out of it for two years?—It was not entirely due to that. You are referring to what I say with regard to carrying out experiments. The reason was not merely due to the bad state of the farm entirely, but it was also due to the fact that the time and energies of the staff were devoted a good deal towards getting the necessary arrangements made for the transfer and so on and supervising the erection of new buildings and that sort of thing. It was the general disturbance as well as the fact that the farm was not in the condition that it ought to have been.

9933. Am I safe in saying that you adopted a different method of farming?—Yes, a totally different system.

9934. Is it not right to say that you used fertilisers very freely?—Yes.

9935. What I wanted to ask you was whether this farm you took over is typical of other farms in your district?—Do you mean was it typical before we took it?

9936. Yes?—It was not quite typical in this way, that the previous tenant laid all the land down to grass, and simply used it very largely as a sheep run. That tendency was noticeable and is noticeable at the present time among similar farms; but at the same time it was not carried to such extremes as by the previous tenant of this farm.

9937. You say in your précis that you took out a lease for 35 years. It was let previously on a yearly tenancy was it?—I am not quite certain of that. At any rate the previous tenant farmed I think fairly well, knowing that he would have the farm during his lifetime. I mean the estate is well known as not interfering with sitting tenants unduly. But I cannot answer definitely as to whether he actually had a lease or not.

9938. Then I take it, it is safe to say you had no fear of being turned out. That was not the reason why you took out the lease, was it?—That we had no fear of being turned out?

9939. Yes?—As we had just been turned out of the previous farm, we naturally were a little apprehensive. At any rate we did not want to run any risks. Also there was the fact of course, that we were prepared to do more in the way of permanent improvements than an ordinary tenant, and we wanted to be secure.

9940. Would it have been safer to go the whole hog and buy this farm out? You know it is being done in Wales very generally, is it not?—Yes; but I might say I was not in charge of the farm at the time. I cannot say whether the farm could have been bought, or whether the College was in a position to buy it. I imagine it might have been a little difficult to find the purchase money.

9941. On what grounds is this £200 grant paid to the College?—For experimental and educational work.

9942. Is this the scholarship of the County Council that you refer to?—No, it has nothing to do with the scholarships. This is money spent on experimental work on the farm.

9943. What area of instruction does this College or farm cover?—Four counties—Anglesea, Carnarvonshire, Denbighshire and Flintshire.

9944. Do you find 40 pupils an excessive number? Do you think one College for four counties is sufficient?—One College of that type is quite sufficient for four counties. We hope, particularly now, to devote our College more to the higher work; and for that purpose one College to four counties such as our's at any rate, is quite sufficient.

9945. Do you think it is possible to have similar results from similar farms in your district, say? Generally we find the farmers are complaining that they are not doing well. This farm in 9 years time has been able to do quite well?—Of course you see the exact position. In 8 years I think it is—not 9 years—there was an average of about £400 per annum to cover interest, clerical work, and management expenses.

9946. And for two years out of that you did nothing but lose money?—Yes. I think I may say that really to get a proper idea of the working of this farm you must average up; because when you say we lost money, I do not think that actually speaking so much money was actually lost as that money was invested, and the return came back in the later years.

9947. But is not it safe to say that this farm or college concentrates more upon the spreading of education than upon financial results?—Yes; but in the summary that I have drawn up I have tried, as far as it is possible to do so, and it is very difficult indeed, to separate the one from the other and give you the results of the farm as a commercial undertaking.

9948. *Mr. Green*: I was rather interested when I was reading Sir Daniel Hall's book on the "Pilgrimage of British Farming" in the statement he made as to—I think it was in Carnarvonshire—as to how suitable the land, climate, and position were for intensive cultivation, that is, small holdings. I was wondering whether your college had done anything in that direction in the way of training young fellows to cultivate intensively in small holdings?—Not directly. I may say that our present farm is not particularly suited to that system of cultivation; and as a matter of fact I think the district to which Sir Daniel Hall referred was particularly South Carnarvonshire where there is land eminently suited for intensive cultivation, as also in many parts of Anglesea and some others in North Carnarvonshire.

9949. Has the movement made any strides in connection with small holdings in South Carnarvonshire?—A certain amount, but not so much as we should like. The development has not been as great or as

rapid as it ought to have been. There is no doubt that much of that land is well suited for this purpose. There is a very good market and we should like very much to be able to undertake work of the kind you suggest in the way of small holdings.

9950. What are the fees of the pupils who come in without any scholarships?—Roughly you may take it £20 a year.

9951. That is very good as compared with English colleges. Then with regard to the question asked by Mr. Smith, adding up the figures on page 18*, I see you get a total for live stock income and valuation of £9,416 19s. 8d., out of a total of £11,460 11s. 9d. That is a very considerable sum total, is it not?—But that includes the valuation, which is about £6,000.

9952. Quite so. So that largely stock is your main stand-by, is it not?—Yes.

9953. Of course you must have a stock of breeding ewes, one knows; but still if you were farming to leave, your profit would be pretty considerable, would it not?—If we were selling out now, our profit would be very considerable.

9954. And at the same time you have capital invested in stock which will bring in a high rate of interest in the progeny of that stock?—That is shown in the ordinary working account.

9955. *Mr. Edwards*: You have had a good deal of experience not only in Wales, but in England and elsewhere; that is to say, you know agriculture pretty well in areas other than Wales?—Yes, I was brought up on a farm in Yorkshire, where I lived until I was about 20, and I also spent two years in agricultural work in Scotland.

9956. And recently you have had other experience?—Recently, while working for the Food Production Department, I have moved about England to a great extent.

9957. What yield of wheat and oats, for instance, do you grow per acre on your farm?—We can grow pretty good crops of oats. I do not want to put the figure too high, but in an average season we can reckon on about 8 quarters an acre, and sometimes exceed that.

9958. Of wheat?—We can grow 5 quarters fairly easily.

9959. You know I am a good Welshman. Mr. Langford has suggested just now about the fertile land of England. Would you be surprised to hear that witness after witness has come before us and said he could only grow between two and three quarters per acre?—I think the statistics of the Board of Agriculture show there must be something rather wrong in that statement, when the average over the whole country, including both bad and good, is about 4 quarters of wheat per acre.

9960. I find here that your total produce this year from about, roughly speaking, 600 acres, is £4,600?—That is so.

9961. Would you be surprised to hear that a farmer was here the other day who farms 2,850 acres, and had only sold £10,500 worth of stuff out of the fertile land of England?—There must be something wrong, either with the land or the management.

9962. You say that you have 10 men and 2 women. I find your labour bill has increased from about £800 to nearly £1,200. I should like to ask you as to the efficiency of the labour, which is a question which has been discussed here a great deal. Will you give me your views as to the efficiency of the labour you have on your farm, which has cost you so very much more to-day than formerly?—We have been perhaps rather luckier than a good many people. We have retained a good many of our old hands, and those who left us to join the Army have now returned. Allowing for the shorter working days or shorter working week, I do not think there is any serious decline in the efficiency.

9963. Have you any difficulty in finding experts for thatching or stacking, and work of that nature?—No. In North Wales, as you are aware, the practice is, particularly on the smaller farms, that there is no sharp division between the work of one branch and the work of another. A labourer is a sort of general farm hand, and takes his share of pretty nearly everything; and while as a matter of fact one of our men does practically all the stacking and thatching, I could easily get three or four of others, if it were necessary, to do the work practically as efficiently.

9964. Your district is one with a rather heavy rainfall, and therefore draining is necessary for successful farming, is it not?—Yes. I might say a great deal of our land is rather heavy clay and wet; and as you will see from the accounts which are published, we have done a certain amount of draining, and we would like to do very much more.

9965. Do you think it would be possible for a yearly tenant on your farm to undertake the work which you have done under your lease of 35 years as far as draining is concerned?—I might say that we have carried the whole of the cost of the draining, finding both labour and materials, and I do not think that an ordinary tenant would ever dream of that without a very clear understanding with the landlord as to compensation. Of course, having a 35 years' lease, we are pretty sure of recovering our expenditure in that period.

9966–7. The whole area of North Wales is a district of heavy rainfall, just as your immediate district of Bangor; and draining is necessary, in your opinion?—Certainly. I may say that a tremendous proportion of the land that has been drained has been drained with stone drains which very rapidly become useless, and there are immense areas of land which ought to be really good agricultural land fit for the plough or anything else, which are now rapidly reverting to a derelict condition simply for lack of draining.

9968. During the time you have been in North Wales, have you noticed whether there is any draining carried on?—Not in the western parts of the district. I have been in pretty intimate touch with North Wales for the last 14 years, except for the 2 years in which I was in Scotland, and apart from our own draining I do not think I have noticed any draining done either in Carnarvonshire or in Anglesea. Some has been done in the counties of Denbigh and Flint.

9969. Do you think the fact that practically all the farmers of North Wales hold their land on a yearly tenancy, has had any influence on the farmers in not undertaking this work?—Yes, I think that that has a good deal to do with it, though, to be quite frank, I must say I do not notice that those who have bought the farm are readier to drain than those who hold the land on a tenancy.

9970. I should like to have your views on this. A good many witnesses have come before the Commission and advocated the fixing of prices as the remedy, and the prices suggested to us have ranged from 55s. to 90s. per quarter for wheat. Do you think that the mere fixing of prices would prevent the land in North Wales going back to grass?—No, I do not think it would in at any rate the counties of Anglesea and Carnarvonshire. Even at the present time when there is a guarantee of substantial prices during the coming winter, the land is going back to grass rapidly; and the system of farming under grass is so much easier and so much less troublesome, that even though a farmer were sure he was going to be relatively less well off as a result of laying his land down to grass, I think he would let it go down so long as he is sure of making a comfortable living. I do not think the mere fixing of prices would have the effect of keeping the land under the plough in this district where grass is so easily formed.

9971. *Mr. Cautley*: Is this College a Government College?—It is not directly a Government College, but, like most similar institutions, it depends very largely on Government grants.

9972. The College gets a grant?—Yes, the College gets a grant from the Board of Education or from the Treasury, and the agricultural department gets a grant from the Board of Agriculture.

9973. And the farm belongs to the College?—Yes.

9974. In addition to being the technical manager, are you the business manager?—Yes, I live on the farm, and I do practically all the buying and selling,

*See Appendix No. II.

though of course I cannot possibly attempt to do all the detailed work of the farm, which is left to a working bailiff.

9975. You have a working bailiff under you?—Yes.

9976. But do you direct the cropping of it under the various operations?—Yes, entirely subject to the approval of a small farming committee.

9977. Who does this farming committee consist of? I do not want the names, but what are they?—There are three members, an Anglesea farmer, a Denbighshire farmer, and another.

9978. Three practical farmers meet in consultation with you, do they?—Yes. As a matter of fact they meet very seldom, and they leave all the ordinary working of the farm to me. They meet to settle questions when any large capital expenditure is required, or anything of that kind.

9979. But the primary object, I understand, is instructional?—Yes, instructional and experimental.

9980. The first year and the second year show a loss; but the third year, that is the year 1913, shows a balance on the right side of £94 9s. 11d. I understood the Government grant you set off against the cost of the experimental work?—Yes.

9981. That is about balanced?—It is about balanced.

9982. And the rest is the commercial result?—Yes. I think, as I said in reply to a previous question, the farm, regarded as a purely commercial undertaking, is a little out of pocket by the experimental work; but it is very difficult to ascertain the exact cost of experimental work.

9983. But you would say you ought to have credit for something more than the £200?—Yes, but it would not be anything very serious.

9984. I see on the 12th November, 1913, the year showed a balance on the right side of £94 9s. 11d., but against that has to be set the interest and management, has it not?—Yes.

9985. So that that shows a loss?—Yes.

9986. In the year ending 12th November, 1914, there is again a balance on the right side of £115 7s. 8d., but that goes away under the same two items?—Yes.

9987. Was the capital roughly about £6,000 at that time?—I think you might take it about £6,000; but I should like to enter a protest against taking any one year by itself.

9988. I am going to take them all. As a matter of fact, as a public institution I think you have done extremely well; but from the point of view of a business undertaking I have my doubts. This shows £115 7s. 8d. again to be interest on capital and managers' remuneration. Take the next year, 12th November, 1915. That shows a balance on the right side of £49 12s. 2d.?—Yes.

9989. We have now got into the first year of the war?—I might say that includes a complete war year, because our financial year is November 12th.

9990. You are right, it does. Even then it only shows a balance on the right side of £49; but I notice the valuation has increased from £5,357 8s. 4d. to £5,765 14s. 11d.?—Yes; but still that is allowed for in the working account. It does not affect the question of profit or loss.

9991. No; but I was going to ask you, had not there been a rise or appreciation in the value of all farming stock during that year?—No. I do not know whether you were in the room when I explained that to a previous Commissioner. In making our valuations, we have adopted the policy of keeping the valuation of what you might call permanent stock of the farm at pretty much the same from year to year, provided that the quality of the stock is the same.

9992. I am aware of that. I read that in your paper; but I understood from that paper, which is your evidence-in-chief as it were, that your breeding flock and that sort of thing you kept at a constant figure?—Yes.

9993. But the items that you expected or knew you would sell, you took upon a valuation?—Less than a full market valuation, but something more nearly approaching a market valuation.

9994. That would include the corn, for instance?—Yes.

9995. And I suppose that would include the cattle you were going to sell. I see here, for instance, you have a good many cattle?—Yes, we have about 100 cattle.

9996. As they are increasing in value from the beginning of the year to the end, you take this somewhere approximately at market value, I suppose?—No, the cattle are taken at practically the same value each year. For instance, as I pointed out, the cows last year were taken at about £18 a piece, and the same with the young stock.

9997. Supposing you have a 6 months old calf at the beginning of the year, he is 18 months old the following year. You do not put the same price for that, do you?—No, but an 18 months old animal this year is put at the same value as an 18 months old animal last year, provided he is a similar quality.

9998. And that is so all the way through?—Yes.

9999. So that, am I right in saying that the only increase in value arising from the appreciation of values as distinct from quality, would be the corn?—Practically all in the corn. There is a little in the hay.

10,000. But there are no means of picking out from these figures what it is, because there is only a balance of £49 here against hay. The Chairman points out to me that you do charge the farm with the additions to farm buildings £407 19s. 10d.?—Yes. We put up a new Dutch barn and new implement shed, and one or two smaller things.

10,001. So that you are charging against the income of the year the whole of the capital expenditure on that?—Yes.

10,002. It is not a proportion?—No, it is the whole of the total cost. We wrote it off.

10,003. Then you are really doing the farm an injustice from the commercial point of view?—Yes, you will see from my *précis* which has been circulated, taking the 8 years as a whole, I credit the farm with £500.

10,004. Were those brick or stone buildings that you put up?—Stone buildings; and an iron and zinc shed. The whole of that was written off against the year.

10,005. £28 8s. 10d.?—Yes. There is a larger amount in another year somewhere.

10,006. Then in the year ending 12th November, 1916, you show a balance on the right side of £649 1s 2d., and in that year you see the valuation is increased from £5,765 14s. 11d. to £6,181 7s. 2d. That is a considerable appreciation. Is not a good deal of that due to the appreciation of the stock?—No, except as regards the grain. If you look at the balance sheet, you will see in the valuation that at the end of 1916 grain was £713. In the previous year it was £507.

10,007. This shows how the valuations are made out?—Yes.

10,008. Is that the only increase due to the increased appreciation?—If you would like the details, I have them.

10,009. No?—I think you may take it that this appreciation only affects the corn in ricks, and wool which appears in the valuation that year. That wool would be taken practically at market price.

10,010. The reason I am asking these questions is this: that 1916 and 1917 were generally the most profitable years farmers have had, and your accounts bear that out, but a great part of the profit, so far as I have ascertained from what has come before us, has always been due to the appreciation of stocks?—I think you may take it that in our accounts that is not the case, except so far as grain and wool are concerned, and to a small extent hay and potatoes; but the potatoes are so small that they do not affect

the matter. The stock of the farm—and this is very largely a stock farm—are taken at practically the same figure per head, year after year.

10,011. But so far as hay and corn are concerned, except in quantities, these accounts do show, and we can pick them out?—Yes.

10,012. The same thing applies to last year too. The land that you farmed cannot be very heavy clay if you plough it all with two horses?—It is heavy for our district.

10,013. That is what I think you meant. It is not what we call heavy clay in England, which takes three horses and sometimes four?—It is not heavy in that sense.

10,014. But you do plough with two horses?—Yes, sometimes we use three. If we are deep ploughing for roots, we put in three.

10,015. Have you ever considered whether institutions like yours could not usefully send out what I would call travelling advisers, to advise farmers on their own farms?—We have a large staff engaged there largely on that work.

10,016. That is being done, is it?—Yes, in association with various County Councils.

10,017. Do they charge the farmer for their services?—No.

10,018. Is it open in North Wales for any farmer to send to you and ask you to send one of your men down to advise him as to what fertilisers to use and what the soil requires?—Yes, it is open to them, and they do it constantly.

10,019. Is that done in any other Agricultural College that you know of?—I hope we are not behind other Agricultural Colleges.

10,020. I think you are in advance, if I may say so?—That certainly is the case in North Wales, and we are constantly having requests from farmers.

10,021. Mr. Edwards, for instance, a member of this Commission, does not need advice; but assume he did in Wales, if he sent to you, would you send somebody down?—Certainly.

10,022. And if he were to say, "I have this field here which is only growing me 4 quarters of wheat. I am not farming it in the right way," would you suggest what the land required?—We are constantly doing that.

10,023. And that is increasing, is it?—Yes, it has increased very markedly during the war years.

10,024. And the expense of those men you send is paid for by the College?—By the College and by the various County Councils.

10,025. That is a form of subsidy to agriculture, is it not?—Yes.

10,026. But would you agree with me that that is a most desirable way of improving the fertility of the land and getting a greater result from it?—Yes.

10,027. How many men have you engaged on that sort of work?—You would not want to hear the details; but I should say that every member of our staff, it does not matter what his subject is, does undertake that as part of his ordinary work. Whether he is a lecturer in Agricultural Chemistry, or she is a dairy instructress, or whatever the position may be, it is clearly understood that that is part of the work of every member of the staff, and altogether our staff including dairy and poultry instructresses number at the present time I should say from 20 to 24. That is in the four counties.

10,028. Are they constantly employed?—Yes; except some instructresses who are only employed during the summer months. I might say that we regard lectures in themselves as most useful in bringing the staff into touch with the farmers. It is easily possible, I think, to overrate the value of the lectures themselves; but the main thing is to get the staff into touch with the farmers. The real work is done by visiting and the advice given.

10,029. That is what I personally want to see done amongst them all; but do these lecturers travel about and lecture in the various townships and villages?—Yes.

10,030. Are the lectures well attended?—I think as a rule in North Wales we about hold a record. The returns are published by the Board of Agriculture every year, or they used to be, and I think the North Wales attendance is at least as large as in any other area. I am now speaking purely from memory, but I think the average in all subjects would run from 30 to 40.

10,031. My experience in England is that the farmer does not like attending lectures, but he would be glad of advice?—Welsh farmers are rather different.

10,032. You find they are different and will come to the lectures?—They are much more easily get-at-able.

10,033. They will turn out at night and come to the lectures?—Yes.

10,034. Is it your experience that the land, at any rate so far as you know it, needs lime?—A good deal of it undoubtedly does; but at the same time I may say we are finding that though many North Wales soils are totally deficient in lime, the response to lime is not very great. The same thing applies to some fertile soils of Scotland which are equally deficient in lime. But that is a question for future research, and I do not want to go into it. It sounds rather heterodox, to put it mildly.

10,035. What you are saying is news to me?—As a matter of fact I think the explanation is that most of the soil research has been done in the Eastern Counties of England, where undoubtedly lime is very often quite a determining factor. In some of our North Wales soils the conditions seem to be altogether different, and we do not get anything like the same response from lime that they do in many parts of England.

10,036. Important as Wales is, my question was rather directed to the larger part of England.—I know from my own experience and observation that in many areas of England lime is absolutely essential; but the conditions are totally different in Wales.

10,037. What I wanted to know was whether you thought the necessity of lime in the bulk of the soils in England was sufficiently great to make it advisable for the Government of the country to provide facilities for lime being delivered at various village stations?—England is a comparatively big country. I know certain types of soil where lime is so essential that something of the kind would be necessary; but again there are other types of soil where it would not.

10,038. Have you really considered this area?—Of course it is part of my business to consider this and such questions; but rather from the scientific point of view than the economic point of view.

10,039. Would the facility of having lime supplied to certain soils have the effect of increasing the national food?—Undoubtedly.

10,040. But to a really substantial degree is what I want?—Yes. For instance, the fertility of certain soils on the millstone grit appears to depend almost primarily on the presence or absence of lime. But after all they are a comparatively small area of the whole country.

10,041. Take the heavy clay lands in England. Would not the application of lime be of immense value?—It would, certainly be of immense value. I cannot say from my own knowledge or experience whether it would be of sufficient value to justify the Government taking such measures as you suggest. It would be better to ask someone who is more familiar with those soils.

10,042. I remember the time when it was part of the terms of the lease of all lands in many districts that so much lime was to be supplied, and the landlord would supply it. That has all gone out now. You told me that a Government guarantee of prices for cereals would not prevent the Welsh land going back to grass?—No.

10,043. Is not the Welshman rather fond of making money?—Yes.

10,044. If it were profitable to the Welshman to grow corn, would he not grow corn?—It depends how much trouble he is going to be put to in order to get the money. I still stick to the opinion I gave, that

merely fixing prices at anything at all within the range of practical politics would not prevent a very large proportion of the land in North Wales going back to grass.

10,045. That is what I want to get at. Does not that depend on the amount of the guaranteed prices that are fixed?—Yes; but I mean anything within reason.

10,046. My experience of the farmer is that he will grow the crops that will pay him best?—I will put it in this way: Supposing that on a certain farm a farmer is going to make £600 a year clear profit, by having say half the land under the plough, and on the same farm almost entirely under grass he is sure of a profit of £400, he will let the land go to grass.

10,047. Although he could make £200 a year more? —Yes, at the present time.

10,048. Are you a Welshman?—No, I am what is worse possibly—a Yorkshireman.

10,049. Do not say that; I am also. Do you really mean that—because I cannot credit it?—I do, honestly.

10,050. You do not mean to say the Welshman is an idle man?—It is not a question of idleness; it is a question of the trouble of facing the labour question at the present time. As someone said, farming is not merely a means of making money, but it is a mode of life; and so long as the farmer is sure of a comfortable living, a very great number of them, at any rate would be content with a less annual income, provided they were going to be clear of trouble.

10,051. We are here to consider agriculture, and we do not want to keep idle people on the land. We want the land to produce as much as it can; yet you tell me, if it is made too profitable the tenant farmer would prefer the easier way and let it go back to grass?—You can see what happens at the present time.

10,052. I suggest the reason for that is because it is not profitable?—I think the accounts I have submitted to you from a typical farm show that, at any rate, it is fairly profitable.

10,053. I do not want to go back on that; but take your accounts, all the way through. If your tenant had to borrow his money and pay interest on it, he could hardly have lived, could he?—Not taking the period as a whole.

10,054. *Mr. Batchelor*: On your balance sheet for 1911 in the capital account I perceive the overdraft interest for the year is entered. Should not that have been against the working account of the year instead of against the capital account?—That arrangement of the account is put in at the request of our auditors, and it is not for me to question it. If you reckon it up in the eight years that I have shown here, it is a very small item and hardly affects the general position.

10,055. My reason for asking is, that the moment you get the loan paid off, you give credit in the working account for the bank interest £21 1s. 6d. By that time, you see, you have paid off all your debt?—That has struck me from time to time; but again I do not wish to put my opinion against that of our auditors. There is also this: In the last year you will notice we wiped off the whole of the deficit due to bank interest.

10,056. I notice that. Against the year 1918 you have put all your overdraft interest of previous years, instead of letting each year stand by itself?—Yes.

10,057. Coming back to the balance sheet for 1911, there is "Law costs, lease of College Farm and land for cottages, £80 15s. 0d." Is that just for a lease?—It is the whole of the costs in connection with the taking of the farm—the law costs.

10,058. Does it cost £80 15s. 0d. to take a farm at £427 a year rent?—It certainly did to draw up this lease. It was an exorbitant charge, I admit.

10,059. I do not know about exorbitant, but it is very high. You have a credit entry in each of the working accounts for farm fees. What is that for?—A proportion of the fees payable by a certain class of students who spent most of their time at the farm, was charged to that; and in the working account that I have summarised, credit ought to have been given for it, but it was so small that I did not think it necessary to go into such detail.

10,060. In the 1912 account I notice you have rates and taxes, £64 11s. 6d.?—Yes.

10,061. The previous year they were £34 1s. 0d. Have you any reason to almost double them?—I am sorry I cannot exactly answer that question. I was not in charge of the farm at the time. I see they have gone back. But I think probably the explanation is that part of rates due for the year 1911 were not paid until 1912, and there is really part of two years included in 1912. I can only give that as a probable explanation.

10,062. I notice your costs of insurance vary considerably. In 1911 they are £70 2s. 6d., and in 1912 they are £61 15s. 3d. Then 1913 is practically the same; but when you come to 1914, your insurances are down to £36 17s. 4d., and they are given in detail?—I think probably the explanation of that is a difference in policy between my predecessor and myself. He insured a lot of farm animals, valuable horses, and that sort of thing. Personally, I came to the conclusion that the rate of premium was so high that it was not worth bothering about, and as those lapsed, I did not renew them. I think that is the chief reason.

10,063. If you compare 1916 with the 1917 Fire Insurance on buildings, cottages, etc., it is £6 12s. 3d. in 1916, and £30 13s. 6d. in 1917?—The explanation of that is the same, I think. You will see it is pretty much the same in 1918.

10,064. I was wondering if it includes crops, because I do not see crops mentioned in 1917 and 1918?—Yes, I think that is probably the case. We certainly increased all the insurance during 1916 or during 1917, to allow for the rise in values, but I think there is some overlapping there. The amounts are not strictly comparable.

10,065. Could you tell me on what principle you arrived at the unexhausted value of manures and feeding stuffs?—We, or the valuer rather, follow in that way the custom of the district, which is to allow one third of the cost of feeding stuffs for the year following their use, and one sixth for the year following that. The practice with regard to valuing manures varies a good deal. Nothing is allowed for sulphate of ammonia and nitrate of soda; but I think in the case of superphosphates and basic slag about one half is allowed.

10,066. Do you consider your land is as good as it was before the war, or have you taken more out of it? —We have certainly taken more out of it, in this way, that a considerable proportion was under grass, and grass always represents an accumulation of fertility. We have drawn on that to a great extent.

10,067. So may I take it in this way, that your unexhausted values in the land are not now of so much value as they were in previous years?—No, I do not think they are, though, at the same time, the condition of the farm is no worse than in 1910 when the farm was taken over. It is not in the same condition as it was in 1914. I think there is no doubt of that; but as far as we can see, it is in about the same condition as in 1910.

10,068. Taking your account for the year ending 12th November, 1918, you had a very good year; because, in addition to the £483 7s. 7d. balance, you wrote off the whole of the balance of the capital account of £485 10s. 4d., and also £1,159 7s. 5d., repayment of loan?—Yes, though I think the position is put rather more clearly in the summary that has been circulated. The total would be just over £2,000, really.

10,069. That is for the year 1918. You made just over £2,000; for the year finishing 1917, you made fully £1,000?—Though that should be taken along with the explanation that I have added, to a large extent in these years we were reaping the benefit of

permanent improvements represented by the deficit in 1910 and 1911.

10,070. And, in addition, taking more out of the land through grain crops, instead of having it in grass?—Yes.

10,071. *Mr. Rae*: With regard to your rent, I see you put 265 acres of low ground at 32s. 3d. an acre, and 400 acres of hill at 6s. an acre. Are they adjoining? Is the hill just outside the other?—Yes, practically adjoining. There is a small break, but it is not more than a few yards.

10,072. Because, on the face of it, if adjoining land is worth 32s. 6d., 6s. for the hill looks a very low rent. I take it you take the whole place at a lump rental and apportion them for your own convenience?—It was really just for the purpose of this Commission, so that they might get some idea of the relative values of the land.

10,073. Have you charged the whole of the Sinking Fund to the low ground, because that would make a difference?—No, I arrived at the total of £629, and then allocated it as well as I could between the three classes of land.

10,074. According to your estimate of the respective values?—Yes.

10,075. What does the grazing of 860 sheep cover—the whole year?—No, just the summer months. Of course, it is very difficult to estimate that, but I may say how I fixed it was in this way: that before the war I could get winter grazing for sheep at from 4s. 6d. to 5s., and about half that seemed a fair charge for the summer grazing. It is, of course, a very rough estimate.

10,076. That only works out to 1s. 10½d. a head, and for the other six months it amounts only to about 1d. a week?—It is not that exactly. We turn the yearlings up to the mountain about the beginning of April, say from 220 to 250 of those. Then we turn the ewes and lambs out about the middle of June after they have been shorn. So that it is not really 860 for six months.

10,077. I suppose it would not affect your general balance sheet, but it would rather affect the corn and their stock rations?—I do not think it really affects the accounts at all, what relative value you put on it. I thought that by allocating it in this way, the Commission would be able to form some idea of the type of land. I do not think it affects the accounts so long as it is approximately correct.

10,078. The other land is more than five times as valuable as the hill; that is 6s. as against 32s. 6d.?—Yes; I do not think there is much wrong with that. The most difficult thing to estimate is the value of the open mountain grazing.

10,079. If you separate your corn returns from your sheep returns, it looks as if you were hardly doing the sheep justice?—From the accounts, as prepared here, you cannot separate the corn from the sheep, because included in the returns from the sheep are the sales from sheep fattened on the low ground. We fatten our wether lambs on the low ground during the winter; so that you cannot, strictly, separate the mountain from the low ground.

10,080. They all run backwards and forwards. Why do you write down the value of your pedigree animals below the actual cost?—Simply to be on the safe side. It is of course a very difficult matter to ascertain the value of pedigree animals. It is a much simpler matter to estimate the value of an animal from a commercial point of view.

10,081. You take then in your valuation simply as commercial stock?—Yes. The object of that is to keep the valuation at pretty much the same level the same year, so that the balances shown in the accounts are genuine balances, and not paper profits, or losses due to fluctuations in market value.

10,082. Then the wages rise from £835 in 1912 to £1,179 in 1918. Are, approximately, the same number of people employed?—There were not so many men in 1918. Of course, labour was practically unobtainable. There might be the same number, but the great proportion in 1918 were women.

10,083. It is not the same quality?—There was not the same number of men by any means.

10,084. Then is your working staff calculated simply on a commercial basis, or have you had extra hands because of your experiments?—We have to have extra hands on account of the experiments. That, of course, is the chief expenditure in connection with experiments.

10,085. So that your labour will really be a higher figure than it would be if you simply worked on a commercial basis?—Distinctly.

10,086. So that your profits would be somewhat larger if it were run as an ordinary farm?—I have tried to allow for that in the summary that I have issued. We have a grant from the Government for experiments, and I have assumed that that about covers the cost.

10,087. That covers the extra expenditure?—Yes. I think perhaps it does not quite cover it, but it is somewhere about the mark.

Chairman: Thank you very much.

(*The witness withdrew.*)

TWELFTH DAY.

WEDNESDAY, 17TH SEPTEMBER, 1919.

PRESENT:

SIR WILLIAM BARCLAY PEAT (*Chairman*).

DR. C. M. DOUGLAS, C.B.
MR. G. G. REA, C.B.E.
MR. HENRY OVERMAN, O.B.E.
MR. A. W. ASHBY.
MR. A. BATCHELOR.
MR. H. S. CAUTLEY, K.C., M.P.
MR. J. F. DUNCAN.
MR. W. EDWARDS.
MR. J. M. HENDERSON.
MR. F. E. GREEN.
M. T. HENDERSON.
MR. T. PROSSER JONES.
MR. E. W. LANGFORD.
MR. R. V. LENNARD.
MR. GEORGE NICHOLLS.
MR. E. H. PARKER.
MR. R. R. ROBBINS.
MR. W. R. SMITH, M.P.
MR. R. B. WALKER.

MR. H. ARMOUR and MR. G. G. MERCER, representing the Scottish Chamber of Agriculture, called and examined.

10,088. *Chairman*: You gentlemen are representatives of the Scottish Chamber of Agriculture?—(*Mr. Armour*): Yes.

10,089. You have sent in to us a *précis* of your evidence which is described as a statement of your evidence-in-chief?—Yes.

10,090. May I put that in without reading it; it has been circulated to the members of the Commission?—Yes.

10,091. The Secretaries have just received from you three statements with regard to the cost of growing potatoes in different counties of Scotland.* Those, unfortunately, have not been circulated to the members of the Commission because they did not arrive within the necessary time to do so. The Commission have made a rule that evidence-in-chief should be in their hands for five days so that they may have an opportunity of considering it before they proceed to cross-examine the witnesses. You will see how difficult, if not impossible, it is for the members of the Commission to grasp the figures in such a way as to make an effective cross-examination upon them. A discussion as to whether these three statements should be considered as evidence to-day has occupied the Commission for a considerable time this morning, and ultimately the Commission determined that they should be received, and that any Commissioner who desires to question the witnesses with regard to those three statements, and also, of course, with regard to the evidence-in-chief which has been circulated according to instructions, should be at liberty to do so. On the other hand, in case the examination into those three statements is not exhaustive, and it cannot possibly be exhaustive through their having only arrived within such a time as not to enable the Commission to consider them, that then the witnesses may be recalled if it should be found necessary by the Commission to recall them for further questions to be put to them with reference to those three statements. I was requested by the Commission to express their views to you and their regret that the statements had not been received by the Commissioners in time to give them full consideration before your attendance here?—(*Mr. Mercer*): I think we might explain that we were really pressed to give evidence more particularly as regards cereals, and therefore our report on the cereal matter was prepared and sent forward to you in good time. The matter of potatoes we were not asked so definitely about, and we had very little time to prepare the statements—indeed, the whole matter has been gone into rather hurriedly unfortunately—but our secretary having got together these statements which you received this morning, thought it desirable to send them on to you. I have a copy of them here also, but we are not anxious to deal with them to-day if you are not. We would rather take up this matter at some later time if that suits the convenience of the Commission.

10,092. I have no doubt the Commission will take into consideration what you have said, but of course I cannot stop any member asking you questions on the potato statements?—Certainly not.

Evidence-in-chief handed in by the witnesses.

(1) The Chamber directors appointed separate Committees to prepare evidence on the costs of production of (1) cereals, (2) potatoes, and (3) milk.

(2) My evidence mainly relates to the cost of production of cereals.

(3) I have prepared a statement of the actual cost per acre of carrying on my farm of Niddry Mains, Winchburgh, in the County of Linlithgow, in the years 1913 and 1918.

(4) I have then made up an estimate of the cost per acre of growing cereals—wheat, barley and oats. The statement shows in detail how I have done so. It might be argued that in view of the greater cost of working the green crop and of the benefit accruing to succeeding grain crops, the cost of working the cereal crop should be placed at a lower figure, but, on the other hand, the proportionally smaller cost of working the hay crop goes some way to equalise. I shall explain my views as to this.

* *See* Appendix No. III.

(5) I have also given an estimate of the costs of production for year 1919.

(6) On the basis of that estimate the following prices would be required in order to do no more than meet the cost of production (without providing any profit):—

	s.	d.
Wheat per quarter of 504 lbs. ...	58	0
Barley ,, ,, ,, 448 lbs. ...	60	3
Oats ,, ,, ,, 336 lbs. ...	48	0

(7) Although it may not be strictly allowable to put down Income Tax as a cost of production, and I have not put it down, it ought not to be overlooked that for the most part the tax comes out of the profit of production.

(8) The Scottish Chamber has approved of the principle of the Corn Production Act so far as regards guaranteed prices of cereals. The directors are of opinion that unless adequate guaranteed prices are given, there will very soon be less land under cultivation than before the war. Labour difficulties, with increased wages and shorter hours, increased education and other local rates, will all tend to throw land back to pasture.

(9) It will not suffice to confine the period of guarantee to 1920–22 (the remaining years of guarantee under the Corn Production Act). The guarantee should extend to at least 5 years. As, however, it will be impossible to fix prices so long in advance, I suggest that there should now be fixed prices for crop 1920, and that a responsible Committee be constituted with statutory powers to fix prices for the following four years. They should be bound to fix and publish the prices for each year not later than September in the preceding year.

(10) In fixing prices for years 1920–22 regard should be had to the fact that consequent on excessive and cross-cropping, much land is dirty and will require extra expense for cleaning. It should also be kept in view that in order to clean the land it will be necessary to grow potatoes and turnips on which there may be a considerable loss.

(11) We attach great importance to an adequate guaranteed price being provided for oats, because if this be not done, much of the secondary land which is suitable to this crop, will fall out of cultivation. It is certain that in Scotland, at all events, this is the land to which we must look for maintaining production.

TABLE No. 1.

SCOTTISH CHAMBER OF AGRICULTURE.

Estimated Cost of Production of Wheat, Barley and Oats.

Area under—	Wheat.	Barley.	Oats.	Green crop.	Hay.	Rotation.	Pasture.	Total area of Farm.
1913	25½	94½	61½	90½	87	359	48	407 acres.
1918	66	78½	116	67	46½	374	29	403 ,,

Acreage under rotation, say, ...						360			370			370
Year						1913.			1918.			1919.
Wages:—						£	s.	d.	£	s.	d.	£.	s.	d.
Amount paid in money						874	8	2	1,431	13	1	1,431	13	1
Harvest allowance						10	0	0	10	0	0	10	0	0
Potatoes—8 men 8 cwts. each						8	0	0	20	0	0	20	0	0
Increases affecting 1919, 10 per cent.							—			—		143	0	0
Shorter day ,, ,, ,, ...							—			—		143	0	0
National Insurance and Workmen's Compensation ...						21	10	0	27	0	0	30	0	0
						£913	18	2	1,488	13	1	1,777	13	1
Estimated cost per acre in						1913.			1918.			1919.		
						£	s.	d.	£	s.	d.	£	s.	d.
Rent and rates, etc., per acre						1	14	1	2	2	6	2	3	0
Interest on Capital						0	10	0	0	10	0	0	10	0
Crop and Stock Insurance						0	1	0	0	1	9	0	2	0
Management						0	5	0	0	7	6	0	7	6
Repairs and General Smith work						0	3	4	0	6	8	0	6	8
Depreciation on implements						0	1	6	0	3	4	0	3	4
Saddler						0	1	6	0	3	0	0	3	0
Upkeep of buildings, fences, etc.						0	1	3	0	2	6	0	2	6
Upkeep of horses—14 (1913, 12*s.* per week each; 1919, 24*s.*)						1	4	3	2	8	6	2	8	6
Depreciation in do.						0	4	6	0	9	0	0	9	0
Shorter day, 6 hrs. per week, say, ...							—			—		0	5	0
Wages as above						2	10	9	4	0	6	4	16	0
						£6	17	1	10	15	3	11	16	6

TABLE No. 2.

Estimated cost in 1913 *of*	*Wheat.*			*Barley.*			*Oats.*		
	£	s.	d.	£	s.	d.	£	s.	d.
Cost per acre as per Table No. 1	6	17	1	6	17	1	6	17	1
Dung exhaustion	1	5	0	0	15	0	0	10	0
Artificial manures	0	15	0	0	15	0	1	5	0
Seed	1	0	0	0	18	0	0	15	0
Binder Twine	0	3	6	0	2	6	0	2	6
Threshing, fuel, twine and mill	0	5	0	0	5	0	0	5	0
Thatching material only	0	3	6	0	3	6	0	3	6
	£10	9	1	9	16	1	9	18	1
Credit straw	3	10	0	1	18	6	2	14	0
Net cost per acre...	£6	19	1	7	17	7	7	4	1
Cost per quarter in 1913	27/10			31/6			24/-		
Note—Average price in Edinburgh, 1913	32/8			29/4			22/2		
,, ,, ,, 1912	36/4			33/11			23/11		

TABLE No. 2—*continued.*

Estimated cost in 1918 *of* ...	*Wheat.* £ s. d.	*Barley.* £ s. d.	*Oats.* £ s. d.
Cost, as per No. 1 Table	10 15 3	10 15 3	10 15 3
Dung exhaustion	2 10 0	1 5 0	1 0 0
Artificial manures	1 10 0	1 10 0	2 0 0
Seed	2 0 0	1 15 0	1 17 6
Binder Twine	0 6 0	0 4 0	0 5 0
Threshing, etc.	0 10 0	0 10 0	0 10 0
Thatching, etc.	0 5 0	0 5 0	0 5 0
	£17 16 3	16 4 3	16 12 9
Credit straw	4 7 6	2 4 0	3 3 0
Net cost per acre	£13 8 9	14 0 3	13 9 9
Cost per quarter in 1918	53*s.* 9*d.*	56*s.*	45*s.*

Estimated cost in 1919 *of* ...	*Wheat.* £ s. d.	*Barley.* £ s. d.	*Oats.* £ s. d.
Cost per acre as per No. 1 Table	11 16 6	11 16 6	11 16 6
Dung exhaustion	2 10 0	1 10 0	1 0 0
Artificial manures	1 10 0	1 5 0	2 5 0
Seed	2 0 0	1 15 0	1 17 6
Binder twine	0 6 0	0 4 0	0 5 0
Threshing, fuel, twine, and machinery	0 10 0	0 10 0	0 10 0
Thatching straw, etc. (only)	0 5 0	0 5 0	0 5 0
	£18 17 6	17 5 6	17 19 0
Credit straw	4 7 6	2 4 0	3 7 6
Net cost per acre	£14 10 0	15 1 6	14 11 6
Cost per quarter in 1919	58*s.*	60*s.* 3*d.*	48*s* 7*d.*

NOTE.—Wheat per acre 5 qrs., Straw 35 cwts.; Price	1913.	1919.
Barley „ 5 „ „ 22 „ „	40*s.*	50*s.*
Oats „ 6 „ „ 27 „ „	35*s.*	40*s.*
	40*s.*	50*s.*

(*This concludes the evidence-in-chief.*)

10,093. *Mr. Edwards*: Looking at your evidence-in-chief, I should like first of all to have a statement as to the character of the Scottish Chamber of Agriculture. Is it representative of Scotland as a whole, and what is the constitution of the Chamber?—(*Mr. Mercer*): It is one of our leading agricultural societies in Scotland, its members are drawn from every part of the country—members who farm in all the different styles of agriculture known in Scotland— and in addition to the membership we have affiliated with us farmers' clubs and agricultural associations throughout the whole of Scotland, so that in both ways we can get in touch with agriculture throughout the whole of Scotland.

10,094. In paragraph 4 of your evidence you refer to the greater cost of working the green crop and of the benefit accruing to succeeding grain crops, and you say you will explain your views as to it. I should like to have that explanation, please?—(*Mr. Armour*): We deal only with three crops, namely, the cereal crops. There are three other crops which we do not deal with in these estimates, namely, the potatoes, the turnips and the hay crop. In working the hay crop there is not the same expense that there is attached to the working of the cereal crop. Therefore we think that a proportion of the expense ought to be put to the potato crop on account of the great additional labour required for the crop. In that way we want to equalise between the various crops. On the other hand the cereal crops benefit very materially from green cropping; indeed it is almost essential if you want to have grain crops of good quality and quantity to have green crops and so clean the land. Therefore we think that as these crops are inter-dependent upon one another we might take the cost as very much smaller in all cases.

10,095. You mention here the prices that would be required to meet the cost of production without providing for any profit, 58s. a quarter for wheat, 60s. 3d. for barley, and 48s. 9d. for oats. Those are your figures shewing the cost of production practically without any profit at all on these various crops?—Yes.

10,096. Further on you say: "It will not suffice to confine the period of guarantee to 1920-22." For how long a period do you think the guaranteed price should be given?—Five years, I think.

10,097. Are you of opinion that the price for the 5 years should be fixed at the beginning of the period of 5 years—every 5 years, or yearly, or in what way?—We are of opinion that the prices ought to be fixed each year, and that they ought to be fixed in September; that is, before we arrange to grow the crop, and that you should proceed now to fix a minimum price for grain, and then that there should be a Committee appointed to deal with each of the succeeding four years.

10,098. A minimum price, did you say?—A minimum price.

10,099. In the part of the world that I come from we are yearly tenants, and I should like to know whether it is the same in Scotland, or otherwise?—No, I think we are mostly on 14 years' leases now; it used to be a 19 years' lease, but it has been changed, and it is usually 14 years now. Sometimes there is a break at the end of 5 years, or it may be at the end of 7 years. Of course, that just amounts to a 5 or 7 years' lease, but as a rule these 14 years' leases are not very often discharged.

10,100. So that the practice generally in Scotland is for the farmer to be secured for a term?—During the currency of his lease.

10,101. You mention in your evidence-in-chief the question of labour difficulties. I should like to have your view on that point further developed?—Of course, in Scotland we are practically getting a day less per week from our men than we got in 1913, and the conditions are more onerous now in the employment of labour. I believe we do not get the full measure of work that we engage for; the tendency is rather to knock off a few minutes before the proper time of stopping, and in addition to that meal hours have been added. These things have interrupted the working of the farm labour, and it is a serious consideration for farmers who have a good many horses to lose a day in the week of the use of their horses. When your fields are some distance away from the steading it is a very great loss of time because you have to send your horses out to these distant fields and you have a shorter time to do the work in. All that militates against the farm work. In addition, the men are not so caring now to work overtime unless they are

very well paid for it, and sometimes even although you do want to pay them well for it they do not care about doing it at all. We have all these difficulties to contend with.

10,102. You refer also to the increased rates of education. We in this country are possibly behind you in Scotland, and I should like to have your views as to education and its effect upon the working men on the farms and also upon farmers themselves?—The only experience we have at present is of the cost of education. We know that that has practically risen 50 per cent. on account of this new arrangement. As far as the new Education Act is concerned with regard to farm working, we anticipate that it will very materially affect it. As I say, we have no experience of that yet, but judging from what happens in other employments, we think that it will very much restrict the labour of young people on the farms. We have to allow them away to attend these evening classes for two hours a night, or for two hours a day four days a week. We anticipate that that will increase our difficulty in getting young people on to the farms.

10,103. Referring back to the responsible Committee which you suggest should be appointed to fix the prices every year during the 5 years' course which you propose, what kind of Committee would you suggest—how would you constitute the Committee?—I would rather leave it to this Commission to fix a Committee, but if I had to suggest the constitution of it I would suggest that not only the interest of the farmer and the farm worker, but also the interest of the landlord should be represented on the Committee.

10,104. Do you mean that the State should guarantee wages to the labourer—which is practically already guaranteed—wages and a profit to the farmer, and also the rent to the landowner?—Certainly.

10,105. I presume you are a farmer yourself?—I am.

10,106. In view of the fact that you ask the State to undertake such burdens as those, do you think that it is likely that the State will do it without having absolute control of the farms, and farming the land and everything else?—I would not suggest that they should have absolute control, but I think they would be entitled to get certain figures from farmers which would justify them in fixing these minimum prices. I would ask for such information from farmers as they could give. I do not think I would trouble them to give a complete balance sheet of their farm, because with the present generation of farmers I think that would be impossible; you will never get them to give a complete balance sheet of their farm; the men are not trained to do it, and unless they kept clerks to provide it, I do not see how you could get that from farmers.

10,107. Not even in Scotland?—Not even in Scotland.

10,108. My point is this: if we recommend the State to give the guarantees that you ask for, would you be prepared to allow your farm to be put under complete control, similar to what was done during the war—that there should be an Order upon you to plough up so much land and to cultivate it in a certain way, on similar lines to what was done during the war?—I am afraid that would be impracticable: you could not exercise complete control or you would destroy the whole industry.

10,109. Do you really think that for the State to fix prices in this way is practicable. Do you, as a farmer, favour the idea of the State stepping in in this way and fixing the wages and prices and everything in the manner suggested by you?—I would rather not have it at all, but at the same time you have got to face the difficulty that unless you do something of that kind, the whole of the land will go out of cultivation; the expenses of the cultivation of land at the present time are enormous.

10,110. Have you paid any attention to what is the likely trend of world prices in the future, with regard to grain crops?—Judging from past experience, when farmers had to accept from about 25s. to 30s. a ton for potatoes, and from 20s. to 25s. a quarter for wheat, and from 28s. to 35s. for fat cattle, then of course we farmers who have come through that period anticipate that the same thing will happen again unless there is something to stop it; that is what we are afraid of.

10,111. It has been asked here, and I will put the same question to you; assuming that the State should follow your advice and give the farmers this guarantee all round, do you not think that other industries will ask for the same thing—the manufacturers of implements and of all other articles?—Yes, but I think it is especially in the farming industry if the country is to go on at all, that the rural population ought to be encouraged for the purpose of supplying the bone and sinew for these industries of which you talk. The farming industry has a different claim altogether upon the nation. If it is to go on and to produce food for the men who work in those other industries, and to produce food for the country, then you must consider whether it is to still go on, or whether it is to sink.

10,112. Assuming that no guarantees be given and that we follow the same path as before, what will be the result in Scotland?—The result in Scotland will be that every farmer will hurry to put his land down to grass. He cannot continue to farm unless he reduces his labour bill. I know, in my own case, my first operation would be to put away one-third of my horses and one-third of my men and lay my fields down into grass. Instead of growing potatoes and cereals, I would produce grass and feed my land through the grass. I simply could not continue to produce potatoes and fat cattle under the present circumstances or what we see in the future before us.

10,113. On account of the cost of labour?—And other material—manures.

10,114. Assuming you did, what would be the result. Do you think you would be able to produce a larger quantity of beef and mutton?—Certainly not—a smaller quantity. It has never paid the farmers in Scotland to produce beef and mutton—beef especially.

10,115. What has it paid them to produce?—Of course some crops pay and others do not pay, but we all know that the man persists in feeding the cattle. There are some years in which he comes out all right, but, as a general rule, he loses money. He produces the manure from the cattle at an enormous expense and then he is recuperated through his green crops and his cereal crops. That is where he produces his profits, not in the feeding of cattle.

10,116. Assuming you do not cultivate at all, where would the profit come from?—I would not have the expense; it is the expense that is going to run away with the thing—the labour and the cost of manures.

10,117. Your remedy is that the prices of corn, wheat, oats and barley should be fixed by a permanent Committee?—Quite.

10,118. *Mr. Duncan*: Has this statement that you have put in been before the Committee of the Chamber?—It has.

10,119. Is this accepted as the statement of the Committee?—Yes.

10,120. Is what you say in paragraph 4 and which you have explained here to-day the view of the Chamber as to the method of arriving at the cost of the production of cereal crops—that is to say simply taking the same cost for all crops?—Yes.

10,121. Is that the view of the Chamber?—The difficulty is in taking a crop by itself and putting down so much for ploughing and so much for harrowing and so much for each of the operations. The difficulty is, whether these operations are put down with a view to profit or whether they are put down as the net cost. The way it is dealt with here is it is the net cost, and the wages cost which is the high cost, and we spread them across the three crops. We think that we can only arrive at a true estimate on those lines.

10,122. I am not questioning the validity of your method; I simply want to know whether this is the method adopted by the Chamber after consideration?—It is.

10,123. The figures you have given us are the actual figures for your own farm?—Exactly.

10,124. How many men had you employed on the farm in 1913?—I could not tell you that. I had only eight men employed that were getting benefits.

10,125. You do not know how many men you employed in 1913?—No, I have not that information here.

10,126. How many horses did you have?—Six complete pairs.

10,127. How many men have you employed on the farm at the present time?—Eight men, two boys, and about eight or ten women.

10,128. You cannot say whether you have more to-day or less than you had in 1913?—No, I cannot; I expect I have less.

10,129. What have you included in the charges here? Are these the total wages of the whole farm?—Yes, these are the total wages.

10,130. You have six horsemen, I suppose, at present?—Yes.

10,131. Are the boys put on the horses?—Yes, as a rule

10,132. Have you a steward?—I have.

10,133. A cattleman?—I have not a cattleman just now.

10,134. Is there anything in these figures allowed for cattlemen?—No.

10,135. The women workers are included?—Yes.

10,136. Can you tell us what the rate of wages paid to ploughmen was in 1913?—£1 a week.

10,137. And the rate in 1918?—41s.

10,138. And the rate for your women workers in 1913?—10s. a week.

10,139. In 1918?—£1.

10,140. So that you have an increase of 100 per cent. in the rate of wages?—I have—and more now.

10,141. There has been an increase in the actual amount of wages paid of 63 per cent?—Yes—I suppose I may take your figures as correct?

10,142. So that you are working with a considerably reduced staff?—I think I am.

10,143. In view of that do you still stand to your statement that you are getting one day a week less work from your men, that they are knocking off before time and that they are having their meal hours, and that they are not caring much about working overtime?—I do.

10,144. With a shorter staff and with a larger area under cultivation, you still say you are getting less satisfactory work out of the men?—I have a less acreage under green crop; there is 30 per cent. less green crop there.

10,145. In 1918 you had 29 acres of pasture, as against 48 in 1913; you had 116 acres of oats in 1918 as against 61½ in 1913; and 67 of green crop as against 90½ in 1913?—Yes.

10,146. Your wheat acreage in 1918 is greater, your barley and your green crop are less, and there is a big increase in oats in 1918 and a big decrease in hay in the same year?—Yes.

10,147. But you have a little more rotation acreage in 1918 than in 1913?—Yes, cereals.

10,148. The rate of wages rises over 100 per cent., and yet you say you are not getting the same labour to-day out of the men as you were then?—No, but you must consider that we are finding it increasingly difficult to get forward with the work, and we know if we are to continue this we have got to put on more men, and not only more men but more horses.

Mr. Mercer: There is another point that always affects labour on the farm, that is the weather; and what Mr. Armour has felt, along with many more farmers, this year is that we have laboured under the very best conditions as regards weather for getting on with work. Never in my experience have we had so few stoppages as we have had this summer, and last winter also.

10,149. For what period are these wages taken?—(*Mr. Armour*): From the 11th November.

10,150. Your 1918 figures are from November, 1917, to November, 1918?—Yes.

10,151. So that Mr. Mercer's statement as to the remarkably good summer does not affect that?—(*Mr. Mercer*): I was referring to the last column. (*Mr. Armour*): We had an open winter for ploughing. (*Mr Mercer*): We have had two very good winters.

10,152. I suppose you engage your ploughmen in the month of May?—(*Mr. Armour*): Yes.

10,153. And you engage the number of ploughmen you want for the normal working of the farm?—Yes.

10,154. If it happens to be a good open winter for ploughing, you do not have any less wages bill than you do if it happens to be a bad winter. That is the case, is it not?—Yes, but there is another element that enters into it. Prior to 1918 we had to deliver our hay to Edinburgh, a distance of 10 miles. That took up a considerable time with the men and the horses. In 1918 the Government bought the hay for the army, and some of the straw too, and it was baled and sent to the Railway Station and, therefore, we had not the same amount of labour in delivering our hay in 1918 as we had before. That would account for the difference to a considerable extent.

10,155. Would it account for the difference in wages during that period?—Yes, it would.

10,156. Can you tell us when you shortened your staff?—I have not shortened my regular staff; I may have shortened my casual labour.

10,157. Your regular staff upon whom the operations of the farm depend is the same to-day as it was in 1913?—Yes, but we have to employ a lot of casual labour.

10,158. Is it as regards the casual labour that you make the statement that you are now getting one day's work a week less?—No, both.

10,159. Is it the casual labour that is working unsatisfactorily, or the regular staff?—I would not say that the labour is unsatisfactory at all. What I say is, that with the shorter day we are certainly getting less labour, and it is affecting the farm work very materially. I do not deny that it is quite a good thing for the men to have more leisure; we are all in favour of that, but that is one of the difficulties we have to get over as farmers.

10,160. You put an estimate here in your 1919 figures of 10 per cent. increase in wages. Is that an anticipation of what may happen, or what increase are you allowing for there?—I have allowed for an increase on the ploughman's wages of 3s. on 41s., which is about 7½ per cent., and on the woman workers I have allowed 3s. a week on the £1, which is 15 per cent., so I took an average of about 10 per cent. I thought that would come about near the thing.

10,161. Are your women being paid 24s. a week now?—23s.

10,162. How many women do you employ regularly?—Usually 8 to 10 women.

10,163. Your 10 per cent. is a rough figure; it is not accurately worked out?—It is a near approximation, I think.

10,164. If you revise the figure again, I think you will find that your percentage is not strictly accurate?—I am certain it would work out all right for the year.

10,165. You take 10 women at £1 a week, and six horsemen at £2 1s. a week, the increase in the case of the horsemen is 7½ per cent., and in the case of the women 15 per cent., and you say that the total increase comes to 10 per cent. I submit that your percentage is not quite accurate?—There may be a little difference.

10,166. What does the actual shortening of the working day represent?—Six hours in the week.

10,167. So that you are not getting one day's work less a week?—As compared with 1913 we are.

10,168. In 1913 in your district the Saturday half-holiday was general, was it not?—Not quite.

10,169. I think it was in May time of 1913 that the Saturday half-holiday came into operation?—I think you are wrong.

10,170. I am examining you at the moment of course, and it is not for me to give evidence. These six hours were reduced at the May time this year?—Yes.

10,171. What number of extra hands did you employ at the May time 1919, as compared with the number employed in 1918. I am referring to the regularly engaged servants for the 12 months?—The number of my regularly engaged servants is very much the same—that is the men servants; the women vary considerably.

10,172. I suppose most of your women would be bound?—No, they are not bound at all.

10,173. They form part of your casual labour. They are all casual.

10,174. This increased cost of £143 is an increased cost in your casual labour?—It is an increased cost in labour, including casual labour.

10,175. If you have not increased the number of your workers, and allowed the 10 per cent. increase to the regular workers, this increase must be due to the casual labourers?—It is partly due to them.

10,176. What increase is due to the regular workers?—I have not worked that out.

10,177. Is it included in the increase of wages given at the May time?—Yes.

10,178. But you have already included that up above. You have allowed £143 for the increases affecting 1919—10 per cent. I understood you to say in reply to my question that that allowed for the increase of 3s. to the ploughman and 3s. to the women workers—that is to say, those regularly employed?—Yes.

10,179. You then allow £143 for the shorter day. You said in reply to my question that you had no increase in your regular staff. That is, therefore, an increase in respect of the casual workers?—They have got the allowance too.

10,180. So that the £143 is an increase in respect of the casual workers?—Yes, together with the main workers.

10,181. I want to get this clear. If it includes the increase to the regular workers, how can you put in two items, one to cover the increase on the regular workers and another item to cover the effect of the shorter day?—I think I am entitled to do that. If you give a shorter day it costs you so much more to do the work; you get so much less work in the day.

10,182. If it costs you more to do it, I ask you to turn again to your figures. You state that the total amount of wages paid on your farm in 1913 was £874?—Yes.

10,183. You have already stated that there was a shortening of the working week sometime during that period because of the Saturday half-holiday being given?—Yes.

10,184. In spite of that fact, with an increase in the rate of wages paid of over 100 per cent., the actual increase of wages paid is only 63 per cent. In the fact of that how can you say the decrease in the number of hours worked increased the actual amount of wages paid?—I do not quite follow your question yet.

10,185. I will put it again. In 1913 the actual wages paid were £874?—Yes.

10,186. In 1918 they were £1,431?—Yes.

10,187. That is an increase of the actual amount of money paid in wages of 63 per cent.?—Quite.

10,188. The increase in the rate of wages during that time was over 100 per cent., so that the increased rate of wages paid does not show itself in the actual amount of wages paid—it does not show the same percentage?—No, but it shows it in less work, because, as I explained to you in the case of the hay and the straw, instead of that having to be carted away to Edinburgh 10 miles it was sold to the Government and delivered to the railway station, which reduced the working of the farm very materially.

10,189. Does that account for a difference of 37 per cent.?—It would account for a considerable difference.

10,190. Does it account for 37 per cent.?—I cannot put it into a percentage, but it would account for a very considerable difference.

10,191. You cannot say what amount it would account for?—No, I cannot account for that.

Mr. Mercer. There is one thing that made one accept these figures of Mr. Armour's very readily, that is the fact that most of us in 1918 were working with reduced staffs. Personally I was very considerably short as compared with 1913. To-day I have three more men working on my farm than I had last year. So that there is a distinct rise in the number of labourers on the farm and with those extra men the labour is being kept forward; but without them I am afraid it would have been very much behind. That is why we did not challenge those figures.

10,192. Coming further down in your figures, you show an increase in rent and rates between 1913 and 1919 of 8s. 11d. per acre?—(*Mr. Armour*): I may explain that in this way: if the present cost of rates and taxes and also the upkeep of buildings is to be borne by landlords, I put that in for the purpose of showing that in fixing a price it would require to be taken into consideration. That is the only reason I have for putting the increased rent there.

10,193. Does that answer also apply to the figure for 1918, which shows an increase of 8s. 5d. per acre over 1913?—Yes, that is right.

10,194. So that the figure of £2 2s. 6d. is not an actual figure?—It is not.

10,195. Are there any other of your figures in this statement which are not actual figures taken from your books?—No there is nothing else.

10,196. All the other figures are actual figures?—Yes, except the depreciation of horses; that is an estimate of the effect of the shorter day as regards the horses.

10,197. At what rate do you take your interest on capital?—5 per cent.

10,198. Reckoning your capital as £10 to the acre?—Quite.

10,199. Your depreciation on implements is also an estimate?—Yes.

10,200. At what rate is that taken?—It is taken from my experience of the cost of upkeep.

10,201. On what basis do you allocate your horse labour to these fields—in the same way by taking the total cost of the keep of the horses and dividing it by the number of acres?—Yes. I have made no attempt to allocate the particular field the horse is working in. I have taken the whole working of the farm as a farm and the estimated cost of the keep of the horses.

10,202. You make an estimate of the total cost of the keep of the horses?—Yes, I estimate that they consume 15 lbs. of hay per day, that is 105 lbs. per week, and at 8s. a cwt. that amounts to 7s. 6d. Then I allow 16 lbs. of oats a day, that is 1 cwt. per week at 50s., which amounts to 16s. 8d. That gives you a total of 24s. 2d.

10,203. Coming back to your evidence-in-chief, you submit that to cover these costs as given by you here, which include depreciation, interest on capital, and management, a price of 58s. per quarter for wheat is required?—Yes.

10,204. Is it your view that the Government are to guarantee this price for the year 1919 on the basis of the Corn Production Act?—That is so.

10,205. And that in the event of the market price being higher than that, the farmer will be left free to take what profit he can get?—No, I think that it should also cover a certain profit to the farmer.

10,206. I do not quite follow you?—These are the bare costs, you see; it does not include profit to the farmer at all, and I think he ought to have some profit.

10,207. May I suggest to you that the method which you have taken to arrive at your costs does not enable us to say whether there is any element of profit in it or not, and before we can take this method of arriving at costs we should have to have a complete balance sheet of the farm showing what the farmer is making on the whole rotation. Would it not be possible that in the case of a guarantee of this price you might be making your profit on other crops?—That might be quite possible—indeed, it is a general rule. A farmer loses sometimes, but he makes it up on another. Every year the yield is not the same; you may have more quarters per acre one year, and another year you may have less.

10,208. So that this method of arriving at the costs may include profit?—It might include profit if you have an increased yield.

10,209. Your view is that this price is not high enough—that there ought to be something added to it to cover profit?—That is my view.

10,210. What sum do you think ought to be added to cover profit?—I should think about 10s. an acre.

10,211. That would be about 2s. on the quarter for wheat?—Yes, that would be about it.

10,212. 60s., therefore, is the figure you say would cover profits also?—Yes, it would require to be not less than that.

10,213. In the event of the market price being, let us say, 70s. a quarter, your view is that the farmer should be allowed to sell at 70s. and retain the profit? He would be getting then, according to your figures, 12s. a quarter profit?—That would satisfy the farmer all right.

10,214. Do you think it would satisfy the general taxpayer?—That I cannot say, but as a farmer I should quite like to have 70s. with a guarantee of 60s.; I admit that.

10,215. Your considered view, and the view of the Chamber of Agriculture, is that the farmer ought to be guaranteed a price which will cover his costs, and give him interest on his capital and payment for his management and a profit in addition?—Quite.

10,216. He is to be guaranteed that by the State?—Yes.

10,217. But in addition the farmer, if the markets are favourable, may take any higher price?—Quite.

10,218. You suggest that method for wheat, barley and oats?—Yes.

10,219. Has the Chamber considered the question of applying it to all farm crops?—The Chamber considered that it ought to apply to at least potatoes, because the potato crop is a very expensive crop to handle. It is also an essential crop, and although I do not say that we should have a guarantee of a certain price for potatoes, I think we ought to have a guarantee of a minimum price, which would show no profit to the farmer, but would enable him to carry on, and that we should be guaranteed a market for our potatoes—that there should be machinery set up to utilise the potato crop. We know that we can grow more potatoes than can go into domestic consumption, and if farmers are to be left with a great quantity of potatoes on their hands you may depend upon it that the green crop will fall, and as the green crop falls so will the cereal crop; so that you require to deal with the potato crop, too.

10,220. What about milk?—I would rather not answer questions with regard to milk, because I really do not know anything about milk at all.

10,221. Has the Chamber considered the question of a guaranteed price for milk?—(*Mr. Mercer*): The Chamber has a Committee sitting on that at the present moment, but there has been no time to go into the matter yet.

10,222. Has the Chamber considered the question of guaranteeing a price to the beef producer?—(*Mr. Armour*): No, they have not considered that.

10,223. I notice in your statement here you state that the Scottish Chamber has approved of the principle of the Corn Production Act so far as the guaranteed prices of cereals are concerned?—Yes.

10,224. What exactly is the meaning of that; there is a limitation to their approval?—We approve it thus far, that we approve that the agricultural worker ought to have a sufficient wage for his work on the farm. We think that the farm labourer ought to be paid as good a wage as the industrial worker. We approve of that principle, and we also approve of the principle that if you are to attain these ends then you have got to have something like the Corn Production Act. We approve of it on those lines.

10,225. Why is the approval limited to guaranteed prices for cereals? What part of the Production Act do you not approve of?—I do not say there is any part that we do not approve of, but we mainly approve of that to attain the end that we want.

10,226. That end being?—Increased wages to our workmen.

10,227. Is it really the aim of the Scottish Chamber to get a guaranteed price in the interests of the farm workers in Scotland, so far as wages are concerned?—Certainly.

10,228. That is their sole purpose?—That is one of our purposes.

10,229. What guarantee has the worker received under the Corn Production Act—what is the minimum rate in your district?—What advantage have the farmers received under the Corn Production Act? They have received none.

10,230. What is the minimum rate in your district at the present time?—The minimum rate of wages for ploughmen is 44s. a week.

10,231. Under the Corn Production Act?—I beg your pardon—36s., I think.

10,232. May I put it to you that the Corn Production Act has had so little effect in guaranteeing wages in Scotland that you, as a prominent farmer, active in all that concerns farming in your district, do not even know what the minimum rate is?—I know that the minimum rate fixed by the Wages Board is 36s. a week.

10,233. What is the actual rate you are paying to your ploughman?—44s. a week.

10,234. With any additions?—Yes, there are certain perquisites, free house and potatoes.

10,235. What do you value his perquisites at?—I have no doubt I could get £10 for his house just now, but suppose you value it at £6, and his perquisites I have valued according to my estimate—his potatoes and his harvest allowances.

10,236. That is £2 10s. and £1?—Yes.

10,237. That is, roughly, about 4s. a week?—Yes.

10,238. So that the workman himself, without the aid of the Corn Production Act at all, is able to secure a wage of £2 8s. a week, whereas the Corn Production Act secures him 36s. a week?—Yes.

10,239. Do you seriously suggest that the approval of the Corn Production Act by the Scottish Chamber of Agriculture is in order that they may be able to pay their men a proper rate of wages?—Yes, but unless we can get it out of the land in the shape of crops we cannot pay our men any wages; we are not confined to the minimum price now we are getting far above it, otherwise we could not pay these wages.

10,240. In other words you are dependent for your ability to pay wages not upon the Corn Production Act but upon the market conditions of to-day?—Yes, that is so.

10,241. What does the workman depend upon for his wages, is it not also the market conditions?—Of course he has the general market for his labour, and if he can get more in another industry he naturally wants to shift where he will get more money.

10,242. He is trusting to the market rate?—Yes.

10,243. Has there been any demand from the workmen in Scotland for a guaranteed minimum such as is provided under the Corn Production Act?—I cannot say that there has—no, I do not think so.

10,244. So that the Chamber is much more concerned about guaranteeing the wages of the workmen than the workmen are themselves?—Farmers know that they will not get labour unless they give the market rate, and they are unable to do that unless they get a price for their corn?

(*Mr. Mercer*): The Chamber is very anxious to be sure that there is the ability to pay the wage to the workman.

10,245. You suggest that there should be some statutory committee appointed for the purpose of fixing prices for the following four years, and I think you said in reply to Mr. Edwards that the three interests of farm-workers, farmers and landlords are to be represented on the Committee from time to time? (*Mr. Armour*): Yes.

10,246. Does the Chamber consider that the consumer ought to be represented on the Committee?—Surely.

10,247. How would you suggest the Committee should be formed: in what proportion would the various interests be represented?—I do not know that I am competent to give an opinion upon that point.

10,248. I understand that this has been adopted by your Chamber, and if your Chamber is a representative body of agriculturists in Scotland anxious to advise as to how these things should be done they have surely gone into some kind of scheme?—I should think that they should have equal representation.

10,249. Each section?—Yes.

10,250. Surely the landlords and farmers would have the same amount of representation as the consumers and workers?—Yes.

10251. In reply to Mr. Edwards I think you stated that you ought to have guarantees not merely for the farmers' price but a guarantee which would secure a rent to the landlord and a wage to the worker?—Yes.

20,252. What method do you propose should be taken for ensuring that the landlord is to get a sufficient rent?—I would consider the obligations that a landlord has to meet in the shape of the upkeep of his property and the upkeep of his buildings; he has to equip the land which is a very serious matter.

10,253. And that a definite amount should be allocated in the cost of production to the rent?—Yes, I should say so.

10,254. Not based upon the price?—It would require to be based upon the price.

10,255. You would not fix the rent first?—You might do it in that way.

10,256. It would not bear any relation to the amount of the rent, that is to say, if the guaranteed price rose, the rent would not necessarily rise in proportion?—Under a lease the rent would not rise, but in the case of a yearly lease it might rise and fall—that is your point.

10,257. You suggest the appointment of a statutory committee for fixing prices, and you say that the price fixed should contain a guarantee to the farmer. That I take it, from what you have stated already, is to cover his costs of production, with the addition of a profit to the farmer. I think you have already said that?—Yes.

10,258. In arriving at the cost of production to the farmer you have to allocate a certain amount for rent?—Yes.

10,259. Which would be quite independent of the other costs of production?—Quite.

10,260. The method would be to find out the increased outlay on the part of the landlord, and he would get his rent raised accordingly?—Yes.

10,261. How would you propose to fix the remuneration of the worker so that he would be guaranteed something?—There is machinery for that already under the Corn Production Act.

10,262. As I have already pointed out to you, when farmers are getting prices much above even the figure you are asking for here as a guarantee, that machinery fixes a rate of wage 12s. a week below what your workmen can get in the market. Do you think there is any guarantee there for the workers?—Yes, in this respect, that the farmer is getting a bigger price than is held out to him under the Corn Production Act, and therefore he shares his increased prices with his labourers.

10,263. You are asking for a guarantee which shall cover the cost of production and give a profit to you?—Yes.

10,264. You are prepared to leave the workmen to the machinery of the Corn Production Act which fixes the minimum rate of wages 12s. below the present market rate?—The Corn Production Act fixes a minimum price for the produce which is greatly below the market price of the produce, and therefore the ploughman is getting the benefit of the higher price that we as farmers are getting.

10,265. You fixed your wages in the month of May, 1918?—Yes.

10,266. What guarantee at that time had you with regard to price?—We had only the Corn Production Act by way of a guarantee. Of course, we knew that unless we paid these figures we would not get the men.

10,267. In other words they were not sharing in any guarantee that you had because there was no guarantee in operation at all. You were simply willing to pay the market rate independent of what price you got for your crops?—Yes, but it would have operated as soon as the next year came round.

10,268. Were you present when the rate was fixed in your district that year?—No.

10,269. I think you were present, Mr. Mercer?—(*Mr. Mercer*): Yes.

10,270. Is it not the case that the farmers stated then that they expected to get a very much lower price for their crops this year?—There were statements made backwards and forwards which I have no copy of to-day, that it was possible that there might be a fall.

10,271. They argued against an increase on those grounds, but in spite of the fact that they did not know what the price was going to be they raised the wages. It was a market rate which the men secured entirely independently of sharing in the farmers' profit?—(*Mr. Armour*): It is the market price we are getting for the grain to-day.

10,272. You have no further guarantee to offer to the workers than the Corn Production Act and the Wages Board under the Corn Production Act?—The principle of the Corn Production Act. We do not think that the guaranteed prices under the present Corn Production Act will be of any use at all.

10,273. Are you prepared to take a guaranteed price based on the minimum rate of wages under the Corn Production Act?—Yes, I do not see any objection to that.

10,274. What would be the effect if you based your cost on the 36s. instead of 48s.?—The farmer would require to take the risk.

10,275. I think you stated in reply to Mr. Edwards that control would be quite impracticable to the operations of the farm?—Severe control.

10,276. Would you favour any form of control that the farmer would be under in return for his guarantee?—I would much rather not have control at all, but if the farmer is to be guaranteed a price for his grain then I cannot see but what the farmer must submit to some control, but I would make it as limited as possible.

10,277. What would the nature of the control be?—The nature of the control would be that he would be required to farm his land according to the best methods, and that he would have to conduct his operations so that there could be no fault found with him.

10,278. But he would be free to grow any particular crop he liked so long as he was farming properly?—Certainly.

10,279. You would put no limitation upon him in that respect?—No, not in producing crops.

10,280. It would not necessarily mean the production of cereals; there would be no compulsion upon the farmer to grow cereals?—If you do not grow cereals I do not know what you are going to grow.

10,281. You make your profit on the cereals, do you?—To a certain extent. You will not grow them if you do not make a profit on them.

10,282. You want a guaranteed price, but at the same time you want the farmer to be left free to grow whatever crop he pleases so long as he is farming his land properly?—Yes.

10,283. You have stated that it does not pay the Scottish farmer to produce beef and mutton?—Yes.

10,284. Are you applying that statement generally to Scotland or only to the corn growing districts, such as the Lothians?—I am applying it to general farming on the four course rotation, feeding your turnip crop off and making manure for the succeeding crops. I do not apply it to grass land at all.

10,285. Do you mean to say, taking Scotland generally, it does not pay farmers to produce beef and mutton?—Speaking generally, it has not paid arable farmers working on the four shift course to produce beef or mutton.

10,286. Will you explain to the Commission how it was that the counties which were principally engaged in producing beef were counties which were able to keep the land continually under the plough and did not let it go down to grass?—Was it worked on the four cross rotation?

10,287. Take Aberdeenshire, for example?—Is it the case that Aberdeenshire is worked on a four shift rotation?

10,288. No, I do not think it is?—It is the four shift rotation I am speaking of.

10,289. You are applying this statement to the corn growing lands?—I am.

10,290. It does not apply generally to Scotland?—No, not to grass land.

10,291. I do not say grass land. You want this statement limited purely to the corn growing districts?—I do.

10,292. *Mr. Cautley*: Would you tell me, Mr. Armour, how many members you have in the Scottish Chamber of Agriculture?—I think, with affiliated societies and altogether, it is a good bit over 10,000. (*Mr. Mercer*): I think it is nearer 14,000 with the affiliated societies.

10,293. Without the affiliated societies, how many is it?—Direct members, somewhere between 3,000 and 4,000, I think. I could not just guarantee those figures.

10,294. That is near enough for my purpose. Are you appointed by them to come and give evidence on behalf of the whole of Scotland?—(*Mr. Armour*): We are, so far as the Scottish Chamber is representative. In all probability you will have the Farmers' Union here as well; but I do not know.

10,295. The Farmers' Union is a different body?—Yes.

10,296. Is that the same as the National Farmers' Union of England?—I think so. I think it is on the same lines.

10,297. And we shall see somebody from them?—I do not know; but there is a body such as that in Scotland.

10,298. If the Scottish Chamber of Agriculture deputed you to come and speak for the whole of Scotland, why have they selected your farms?—They did not select my farms, but they asked several farmers to give a statement that they could submit to this Commission, and I was one of the farmers that submitted a statement, which is here. There are other farmers who did the same thing.

10,299. I notice your statement is not a balance sheet?—No.

10,300. Simply an account of different expenses?—Quite.

10,301. Where is the farm?—It is 10 miles from Edinburgh to the west.

10,302. Which county?—Linlithgow

10,303. Is it good land?—It is fair average land. My farm is rather a heavy farm. It is not a good potato farm. It is too heavy for potatoes.

10,304. Can you plough it with two horses?—Yes.

10,305. What is the rotation of it?—Four shifts. If you begin with hay——

10,306. Is that clover?—That is clover. We cut it for hay. Then after that we usually follow with oats after the seeds. Then we follow with a green crop.

10,307. That is potatoes, is it?—Potatoes or turnips. If we have potatoes, we usually follow with wheat; if it is turnips, we usually follow with barley, and we sow the seeds with the wheat or the barley. That is the rotation.

10,308. So that the bulk of the expense in ploughing is done on the green crops?—That is the most expensive crop in regard to labour.

10,309. That is where you clean the land?—That is where we clean the land.

10,310. How often do you plough that?—It depends. If you get it early ploughed and it lies all winter possibly, you find it an advantage to give it a second plough; but it does not invariably follow that we plough twice for our green crop.

10,311. Do I understand that in your cleaning of the crop, to plough twice in Scotland is unusual?—No, I would not say it is unusual. I would say that, taking the average for Scotland, it is not common.

10,312. Not common to plough twice even?—No, not common.

10,313. I take it you have no real heavy land in Scotland at all?—We have in Ayrshire. There is some in Stirlingshire, where we have very heavy land, and in Fifeshire.

10,314. I know where they plough fallows five or six, and even more times in England to clean them; but that you do not do in Scotland?—No.

10,315. Never?—No.

10,316. You can keep the land clean without?—We never plough more than twice in any case.

10,317. So that makes the cost of production of cereals cheaper than in parts of England?—Yes, I would say so. Where you have so often to plough the land, then it is bound to add to the cost.

10,318. I suppose you only plough for the other crops once?—Only once.

10,319. If that is so, how comes it that you make the cost of growing wheat more than the cost of growing barley?—It is entirely on account of the manure and the seed—the unexhausted manure.

10,320. From what you have told me, the wheat crop followed in the same rotation as the barley crop and it only depended whether it was potatoes, or roots, whether you grew barley or you grew wheat?—I said after the potato crop wheat usually follows.

10,321. Because you get the potatoes off earlier, I suppose?—You get the potatoes off early, and the wheat is getting the first of the farmyard manure that has been put into the soil.

10,322. For the potatoes?—After the potatoes. Therefore there is a bigger exhaustion of fertility takes place with the wheat than with the other crops.

10,323. The barley is grown on the seeds?—After potatoes.

10,324. No, not after potatoes, after turnips?—Yes.

10,325. Do not you manure your turnips too?—We do not manure so heavily. Sometimes there are a great many turnips grown in the Lothians without any farmyard manure at all. The farmyard manure is mainly kept for potatoes.

10,326. Do you call your farm in the Lothians?—Yes, the West Lothian.

10,327. I thought the rents in the Lothians were very much higher than the rent you pay?—It varies very much. (*Mr. Mercer*): There is one point, if I may put it. The wheat has a very much longer period of growth than the barley, and that helps to exhaust a little more of the manure. I think we credit something to that.

10,328. I want to test this. You bring out, as a result of your figures, the cost of the oat crop at very much less than the wheat or barley crop, do you not?—(*Mr. Armour*): Yes,, the cost of the wheat crop is very much more because you will see, on exhaustion, there is £2 10s. allowed for that, while there is only £1 5s. allowed for the barley, and £1 5s. for the oats.

10,329. As a matter of fact you grow a great many more oats in Scotland than you do wheat?—Yes, we do.

10,330. And you are more anxious to get a big guarantee for oats than you are for wheat?—We are.

10,331. Are not your figures rather designed with that object?—No, not at all. I do not think you could say that. They are certainly not designed with that object.

10,332. South of the Tweed, the desire is rather the other way—to get a suitable figure guaranteed for the wheat than for the oats?—Of course you know you may debit the wheat crop with a considerable amount in the shape of cleaning of land.

10,333. And that you have not done?—That I have not done.

10,334. But that ought to be done to get at the actual cost of growing the wheat, ought it not?—That ought to be taken into consideration, to a certain extent. (*Mr. Mercer*): But the cleaning of the land applies to the whole rotation of crops. (*Mr. Armour*): Yes, the wheat gets the first of it.

10,335. I agree that is quite true, but the cleaning of the land, so far as the wheat and oats are concerned, as the wheat and oats come in the same rotation and it only depends whether you have grown potatoes and you have grown turnips, whether you grow wheat or oats is the same for them, whether it is wheat or oats?

—Yes, they all benefit. The whole of the cereal crop benefits.

10,336. And the only legitimate addition to add to the wheat crop was the extra dung?—Yes.

10,337. That is the only one?—Yes.

10,338. And the seeds, of course?—Of course.

10,339. Now I understand your rotation, I think you are justified in the system you have adopted as showing cost. The only other question I would ask on that is, why do you charge interest on capital the same in 1919 as you do in 1913? Has not your capital employed doubled in value?—I do not know. I think possibly there is something in what you say; but I really have not calculated it.

10,340. You see, we want to get the accurate cost. Is not the capital value that you have in your farm stock and crop double what it was in 1913?—Yes, I think you are right.

10,341. If that were so, and 10s. was right in 1913, that 10s. ought to be 20s.?—Yes, it would apply to all the crops.

10,342. How do you get at the 5s. and the 7s 6d. for management?—That is for outlays, such as postages, market expenses, trains, and those incidental expenses connected with the farm.

10,343. I read that as meaning that that was some remuneration for the farmer?—No.

10,344. This is only expenses out of pocket?—Out of pocket expenses. It ought to have been stated so, and there has been a mistake in not stating it so.

10,345. What you would call "Sundries"?—Quite so. It is going to market, and expenses such as postages, stationery; and a whole lot of expenses that are too numerous to mention.

10,346. Do you employ a veterinary surgeon in Scotland?—Yes, we do. He comes in there, too.

10,347. You did explain to Mr. Duncan the cost of your horses. Are these horses used for making the hay on the permanent pasture?—Yes, we have no meadow hay, you see.

10,348. You do not make meadow hay in Scotland?—We do in Scotland; but on a four-shift rotation we do not make meadow hay.

10,349. I quite agree not on the rotation ground, but on the other ground on the farm?—No, we have no meadow hay on that.

10,350. Then are the horses that are employed on the farm simply used on the tillage land?—Quite so.

10,351. Entirely?—Entirely.

10,352. So that it is a fair thing to divide the whole cost over the tillage land?—Quite so.

10,353. I understand you to say that you valued the hay, taking the cost of 1919, at 8s. a cwt., or £8 a ton?—Yes.

10,354. Would it be out of the way to suggest that the consuming value of hay at the present time is £12 a ton?—I thought it would be a bold estimate to put down £12 for hay.

10,355. You dare not do it, you mean, because it is so big?—Yes.

10,356. What are you selling hay at in Scotland?—£12 a ton.

10,357. Do you know that in the South of England it is selling at £16 and more?—I have heard so.

10,358. But it has not got up to those high prices in Scotland?—No, but they are paying £12 a ton in Scotland and it has to be baled, and the Englishman has to pay for the baling and the railway rates and the merchant's expenses; so that I believe it will come to pretty near what you say.

10,359. If it is £12, what is the proper consuming value?—£12 is an abnormal price, and I do not think it will be fair to state it.

10,360. I agree, but we are in abnormal times. I am only looking to next year? There are a great many farms on which there is no hay at all.

10,361. Then that will make the price dearer?—Yes, that has raised the price.

10,362. But you still think £8 is a fair price to put for the whole of the coming winter?—No, not this winter—last winter.

10,363. That is what I am asking you about?—I do not know how to deal with that, because I consider it is an abnormal price.

10,364. Do not you see that the guaranteed prices for this year are fixed already, and we have nothing to do with this year. We have to find a price for 1920 to advise the Government on, and advise them as to what is to be done in future years; and my question now is directed to 1920?—You would be perfectly right in taking the hay at from £12 to £14 a ton in that way.

10,365. Do you mean at the sale price or consuming price?—The sale price is just the consuming price.

10,366. Is that the general practice in Scotland?—I think so.

10,367. Because the consuming price in England is taken at a good deal less than the sale price?—I do not see why it should. The price of hay is what you can get for it in the market, and I think you are entitled to take the market price.

10,368. It is only a method of calculation. If you get the profit on the hay you get less profit on the animals that eat it?—You have to take it as a whole.

10,369. At any rate, you think the present price of hay is at £12 to £14 a ton?—I do.

10,370. Therefore, the cost of growing wheat next year, will be correspondingly increased?—Yes.

10,371. I understood you to say you gave your horses a stone of oats a day?—Yes.

10,372. Is that usual all over Scotland?—I think so. I think they possibly get a little more than that; but there is some time in the year, the summer time, in which the horses run to grass.

10,373. I was going to suggest they would not get anything like a stone in the summer time?—They do not, but they get more in the winter time

10,374. Therefore, it averages out to a stone?—Yes.

10,375. At what price?—50s. a quarter for oats, that is 336 lbs. (*Mr. Mercer*): The period at which horses run to grass in Scotland is much shorter, I think, than it is in the South.

10,376. What would it be in Scotland?—If we get them out for six weeks, that is a long time. We seldom get them out for as much.

10,377. What period would that be?—(*Mr. Armour*): June and July I think you might put it.

10,378. I will ask you one question about your wages. You told me that the wages for your ploughmen prior to the war, in 1913 I think you gave us, and I suppose the were the same in 1914, were £1 a week?—Yes.

10,379. Were the extras added on to that?—Yes, there have been regular rises since that date.

10,380. I am asking you about 1914, prior to the war. You say £1 a week for the ploughman. What extras had he?—The same extras.

10,381. What were they?—He had a house and his harvest allowance.

10,382. What was the harvest allowance then?—It was £10.

10,383. And that has remained the same?—That remains the same.

10,384. He had £10 harvest allowance and so many potatoes.

10,385. *Mr. Duncan*: It is £1 per man you mean, is not it?—Yes.

10,386. £10 for the whole of the men?—Yes.

10,387. *Mr. Cautley*: I am speaking of each man. He had a £1 a week wage, and he got £1 for harvest?—Yes.

10,388. Then he had his house?—Yes, a free house.

10,389. That is worth about 4s. a week you said?—Yes, about 4s. a week.

10,390. And he had potatoes?—He had 8 cwts. of potatoes.

10,391. How many hours a week did he work then?—They worked about 10 hours a day. The Saturday afternoon holiday was gradually beginning to come in at that time.

10,392. I was asking you how many hours a week he worked?—60.

10,393. Mr. Duncan says plus his stable work in addition?—Quite.

10,394. And the wages to-day you said were 44s.?—Yes.

10,395. Together with a free house at 4s., together with his harvest money of £1, and still 8 cwt. of potatoes?- Quite.

10,396. How many hours a week does he work now? —He works 50 hours.

10,397. And his stable time?—Yes, in addition.

10,398. So that the wages have gone up 24s. and 10 hours. Do you pay overtime?—Yes.

10,399. How much do you pay for overtime?—I pay 1s. 3d. an hour just now.

10,400. Is that the standard rate?—I think it is.

10,401. Then to get the same work you have to add on ten times 1s. 3d., that is 12s. 6d.?—Yes.

10,402. So the real addition to the wages is 24s. plus 12s. 6d., that is 36s. 6d., in order to get the same number of hours' work?—Yes, that would follow.

10,403. So the percentage increased is much more than 100?- Much more.

10,404. I will not stop to work it out, but we have the exact figures?—(*Mr. Mercer*): Overtime is paid this year for the first time in the locality from which I come. I do not know whether it applies so much to Mr. Armour's district.

10,405. I only want to get at the rate of increase. I gather that labour in Scotland is good labour? (*Mr. Armour*): Yes, it is good labour on the whole.

10,406. And that of the men is still good labour?—Yes.

10,407. To go back to your own farm, these costs that you have given us of your own farm would depend a good deal, would not they, on the condition your farm was in as to whether they were average costs or not?—I think you might take them as pretty average costs of the district. You will get another sheet made out by another man in Stirlingshire. I do not know whether you have it or not.

10,408. No. Will you please answer my question? How long have you been farming at this particular farm?—Thirty years.

10,409. Under the same landlord?—Yes.

10,410. And on these regular leases that they have in Scotland?—Yes.

10,411. And I assume you are a good farmer?—I do not know. I would not like to say that.

10,412. You think you are. The point I want to get at is this: In taking an individual farm, if the farm, as I presume yours is, has got into a specially clean and good condition, the cost of working it would be very much less and the crops produced would be bigger with the same expenditure, than if you were to take a farm that had been badly done and was foul, and had been impoverished by the want of proper fertilisers?—I would agree with that.

10,413. I want you to tell me what you have to say as to why we should take your farm, which you have farmed for 30 years, as a typical farm in Scotland?—I only take my own farm because I had not access to another.

10,414. I agree; but I do not think the Scottish Chamber has treated us fairly in picking out one which you have farmed for 30 years, unless you are a bad farmer?—They may agree with that.

10,415. And they may have put you forward for that reason?—Yes. (*Mr. Mercer*): I think you are quite entitled at this point to go to the end of Mr. Armour's statement and take his returns per acre there and remember that; because, after all, that is the point we want to get at. A good farm produces more. That is the point we remembered, otherwise we would not have asked one man to come forward.

10,416. Can you give me anything in answer to my last question as to why we are to take your farm as typical of the cost of producing wheat, oats and barley in Scotland, seeing that you have been for over 30 years farming the same land, and presumably you have got it under good conditions? Mr. Duncan suggests that all Scotch farms are in the same condition.

Mr. Duncan: It is not unusual to have a 30 years' tenancy, is what I said.

10,416A. *Mr. Cautley*: Have you anything to say to us on that? (*Mr. Armour*): I think myself that when farmers have been on the farm for 30 years, it will be fairly well farmed. I do not think it is what you might call a model farm. I think it is a fair average farm in the district.

10,417. I take it you are a tenant farmer who lives out of farming. You make your living at it, do not you?—Yes, entirely.

10,418. Mr. Mercer called my attention to the fact that the wheat produced is 5 quarters to the acre. Is not that a good crop?—That is an average crop.

10,419. Do you grow more than 5 quarters of wheat?—I have grown a little more and you might have a little less.

10,420. But only a little less. I should have thought some years you might have a good deal?—You might have only 4 quarters, or you might have 6 quarters.

10,421. Have you ever grown 6 quarters?—Yes.

10,422. Once in 30 years?—Yes. I once grew 7 quarters.

10,423. What is the lowest you have grown?—I have grown less than 4 quarters.

10,424. Have you had less than 3 quarters?—No, I have not had that unless I thought it was a failure.

10,425. But you do get a failure, and that reduces the average?—Yes.

10,426. Is not five quarters more than the average? —I think it is. It would be over Scotland.

10,427. I understood that your farm was put forward here as an average farm?—(*Mr. Mercer*): I think again it is essential to remind you that we grow a very small acreage of wheat, and it is always grown on the best land.

10,428. That accounts for your desire for a big guarantee for oats and a low one for wheat?—You must recollect that in 1912, for instance, we had 62,000 odd acres of wheat as against 956,000 acres of oats. That shows that the wheat crop is grown on a very limited area of our ground.

10,429. This is the point. When we come here we want to find the average cost of growing wheat on a Scotch farm; and the point I am on now is, as to whether five quarters is not more than the average wheat crop?—(*Mr. Armour*): It is not more in the Lothians. I believe five quarters will be the thing.

10,430. When you speak of the Lothians, I know them a little and by repute, and I thought the rent was £4 the acre and more than that south of Edinburgh?—Not now. It is only in the vicinity of Edinburgh where they find these rents.

10,431. I take it that five quarters is the average crop you grow in Scotland?—If you take the whole of Scotland, it is high.

10,432. Can you tell me what the Board of Agriculture returns for Scotland are?—No, I am sorry I cannot.

10,433. You follow that if your farm produces more than the average yield, your figures being the average cost of producing the corn, would make the average cost per quarter higher than you put it?—That is so.

10,434. But I understood you to put forward your figures as the average cost?—As the average cost of my farm.

10,435. That is the thing. Then I say I do not think the Scottish Chamber are behaving fairly to us in sending us only yours and the figures of your farm. What do you say to that?—There is possibly something in what you say; but at the same time I could only give you what I was doing myself.

10,436. Then let us take the oats. You grow six quarters of oats to the acre?—I do.

10,437. Do you say that is the average crop of oats in Scotland?—No, it is high.

10,438. And yet your costs are average costs?—Quite.

10,439. Therefore, again, the cost per quarter of oats is higher than the figure you put before us?—Quite; that would follow. If you have less yield, then you would increase the cost.

10,440. What is the average production of oats in Scotland?—I do not think it will exceed five quarters.

10,441. If you only grew five quarters, it would make a very considerable difference to the cost even of oats?—It would.

10,442. Can you tell me at all what is the proportion of the labour costs to a quarter of wheat on your

farm?—I cannot work it out, but I will tell you where you can get it. Take Table 1, including horse labour.

10,443. Taking 1919, we get "Wages as above, £4 16s." There is one question I wish to ask you about wages. I asked you about your horses. I understand you take the cost of the whole of the wages of the farm?—I do.

10,444. And for 1919 the figures, I gather, are partly estimated. You put down the same figures for 1918 and add 10 per cent., and then another 10 per cent.?—Yes.

10,445. Do those include the whole wages of everybody on the farm?—Yes.

10,446. Stockmen as well as ploughmen?—They do not include the cattle men. I had none last year.

10,447. Then they do not include the whole of the wages on the farm?—All the wages of all the men who are there are included.

10,448. But are they doing any work except what is done on the tillage land?—No, they are all working on the farm. These are the wages that are paid out for men working on the farm.

10,449. Were some of the wages earned on the permanent grass?—The grass land is so very small here.

10,450. So small that it makes no matter?—It makes no difference.

10,451. That is to say, all the work they would do on the grass land would be mending the fences, and that sort of thing?—That is all.

10,452. So we might disregard it and put it all down to the cost of the tillage?—Yes, that is the way I have treated it.

10,453. So you divide that up by the number of acres of tillage, and you bring out £4 16s. 0d. as the labour cost of growing an acre of wheat?—Yes.

10,454. And that £4 16s. 0d., whether it is wheat or barley, is the same?—Yes, it is the same in the wages, because I have spread it across the whole.

10,455. Although the wheat might take more cleaning?—The wheat in Scotland never takes any cleaning.

10,456. Not weeding?—No, it practically costs the same as an oat crop or a barley crop to put in.

10,457. And after it is put in you do nothing to it?—We do nothing except a top dressing with some artificial manure, and then reap it in the same way.

10,458. Then there is no other labour?—No.

10,459. According to you, £4 16s. 0d. for 1916 is the labour cost for growing wheat per acre?—Yes.

10,460. Then taking Table No. 2, where you get to the summary, you start with £11 16s. 1d. in which is included the labour cost of £4 16s. 0d., and you add for dung exhaustion £2 10s. 0d., for artificial manures £1 10s. 0d.; that is the dressing you speak of?—Yes.

10,461. Then seed, binder twine, threshing, fuel, twine, &c., bringing out a total cost of £18 17s. 6d.?—Yes.

10,462. There would be no labour in any of those items?—The threshing, etc., is all in the labour.

10,463. It is all in the £4 16s. 0d. The threshing and getting the corn to the market is all in that?—Yes.

10,464. So that if your £18 17s. 6d. is correct, less the £4 7s. 6d. as credit for straw, bringing it to £14 10s. 0d., the whole of the labour costs of the acre were £4 16s. 0d.?—Yes.

10,465. We can work out the percentage of that. Can you tell me how you arrived at the credit for straw, £4 7s. 6d.?—You will see it down here if you look at the note. There is 35 cwts. per acre of wheat straw.

10,466. And that is about the usual thing?—Yes. I took it as a kind of average.

10,467. How do you arrive at the price of it?—That is about the price it descended to when the Government stopped as buyers.

10,468. In threshing you only charge for fuel and machinery, 10s. a quarter it is?—10s. an acre.

10,469. Is that what you pay for it?—That is what I consider the cost of it for the material only. There is the use of the engine, the fuel, and the wear and tear of the thresher.

10,470. Do you hire it?—No, it is my own. (*Mr. Mercer*): If you had to hire the machinery just now it would need to be a good deal higher. It wants 17s. 6d. an acre just now if you have to hire your machine.

10,471. Is the 10s. you put there simply a fair estimate of the cost, including something for wear and tear of your own machinery?—(*Mr. Armour*): Yes, I think it is a fair estimate.

10,472. I take it that the ordinary farmer does what we do down here, that is hire a threshing machine?—It would be fully more if you hired it, because the hiring man has to get a profit.

10,473. Mr. Mercer has just said 17s. 6d.?—I think he would be about right.

10,474. Your Chamber has come to the conclusion that you must have a guarantee of cereal prices; otherwise, the land will go back to grass?—Yes, that is our opinion.

10,475. Mr. Duncan pointed out that you were already paying 44s. wages, although the guaranteed minimum is 36s.?—Yes.

10,476. Under the Corn Production Act the guaranteed price is 55s. and next year 45s.?—I do not think under the Corn Production Act it is 55s.; I think that is the Government guarantee. I think under the Corn Production Act it is about 30s.

10,477. I am taking the wheat: Wheat at 55s., and oats 32s., and next year it is 45s. for wheat and 24s. for oats; but the prices you are obtaining are fixed under the Defence of the Realm Act, and you get the same prices, 75s. 6d.?—Yes.

10,478. Does the 75s. 6d. enable you to pay the present rate of wages and make a reasonable profit? It does.

10,479. You said in answer to Mr. Duncan that with the increase in price caused by the war and the fixing of this, you were prevented from getting higher prices and enjoying the advantage of the world's prices; but even with the limitation of price fixed under the Defence of the Realm Act, the farmer in Scotland is doing reasonably well, is he not?—Yes. I agree.

10,480. I understood you to say that in your view the farm worker is sharing in that prosperity by getting 44s. instead of 36s. guarantee?—I think so.

10,481. Do I understand you are afraid that when the war ends and commerce resumes its normal course and shipping gets on the sea, prices will fall much below the 75s.?—I have not the slightest doubt that they will.

10,482. I take the same view myself. If so, is it in your view necessary that there should be a guarantee?—Yes. If the land is to be cultivated and we are to get the best use out of our soil, we must have a guarantee.

10,483. Your Chamber—or the members—are all agreed on that?—We are all agreed on that.

10,484. I want you to consider this. We have been told time after time that it is most desirable to have the policy fixed and the guarantees arranged for a certain number of years, so that the farmer may know where he is, say, for five to eight years. If that could be done, would that benefit the farmer? I would much prefer that it should be fixed the year before.

10,485. I am asking you first of all whether a farmer would be better served if he had an arrangement made for a number of years, not necessarily a fixed price?—Yes, I agree with you.

10,486. That would help him to know where he stands, and he would be able to lay out his plans and his rotation on a certainty, as it were?—I agree with you.

10,487. The difficulty in that arises that everything the farmer has to buy varies from day to day; that is to say, his feeding stuffs, his fertilisers, his machinery, and his wages, the latter of which can vary at a month's notice under the Wages Board, but practically two to three months. If there is

going to be, as you and I anticipate, ultimately a great fall in prices, you will easily see that Parliament cannot fix a fixed guarantee for five years?—No; not the price.

10,488. You have suggested in your evidence that it should be fixed yearly?—Yes.

10,489. You know that this Commission is appointed to try to arrive at a price, if we decide on a guarantee at all. How on earth can any Commission fix it, unless you fix the basis on which it is to be fixed?—I see difficulty in it. There is a difficulty in fixing prices altogether.

10,490-91. If you leave it to a Government Department, that leaves it to the Government of the day to fix. If you leave it to an independent body over whom nobody has any control, it is hardly a practicable proposition unless you lay down the basis on which you fix it. Do you agree with that?—Yes, I agree.

10,492. Has your Chamber considered any basis on which it ought to be fixed?—No, we have not.

10,493. Has your Chamber considered as to whether it is possible to make the guarantee on a sliding scale?—No.

10,494. You have not gone into it very deeply?—We have had very little to do with it, and the evidence has been got up very hurriedly, and that was not brought under our notice at all. We thought that the Commission would be able to guide us in that matter. When you produce your figure, no doubt we shall be able to criticise it.

10,495. You are in the trade or the industry, and, if I may say so, I think you put the cart before the horse. You are the practical men in the industry, and we have to hear what everybody has to say and decide on it?—I am afraid I am not a practical man in fixing the prices. I have only to take the market price.

10,496. We do not propose to fix the market price. We only propose to fix a minimum, a guaranteed price; but you have not considered that at all?—No, we have not.

10,497. I assume you have not considered either as to whether it is possible that the guaranteed price might be made to slide, according to the wages?—It would require to be.

10,498. If some scheme like that could be evolved, would that be a satisfactory result for the industry?—I see no objection to it. I think it would be satisfactory; that there would be a sliding scale, according to the cost of production; and if wages are to go up, then naturally the prices ought to go up; and if they are to come down, then the prices ought to come down. I think the prices must have some relative proportion to the cost of production.

10,499. Leaving it to be fixed every year, independently of any fixed rule, seems to me to leave the industry in more chaos than it has been in in the last few years. You cannot suggest any basis on which it can be fixed on a sliding scale, can you?—I am sorry I cannot.

10,500. The only other thing is that the land in Scotland is all more or less of the same quality, is it not?—No; it varies very much in quality.

10,501. But it can all be ploughed by two horses?—Most of it, yes.

10,502. Can you tell me, if you fix a guarantee, whether there is any way of avoiding the consequence that the farmers of the richer and the better land would gain more than the farmers of the poorer land?—Not except by taxation.

10,503. That is the only suggestion you can make as to that?—Yes.

10,504. *Mr. Ashby*: What are the main products on your farm besides the cereals you have quoted here?—The main products are cereals—wheat, oats, and barley.

10,505. Do you feed any mutton on your root crops?—Sometimes.

10,506. And beef in the stalls?—Yes.

10,507. I understood you to say, in answer to Mr. Duncan, that your beef never paid you?—I do not say never paid, but I say as a general rule it does not pay, and I might almost say in five cases out of six it leaves no money to the farmer feeding beef.

10,508. Is that true in the case of mutton?—Yes, it applies to mutton, too.

10,509. Do you grow potatoes on the farm?—Yes.

10,510. Then the position is this: that for the profit on the farm you rely on your cereals and potatoes?—We do; and hay.

10,511. How much hay would you be able to sell, for instance, when you are growing 46½ acres, and have some horses?—It varies. That does not represent exactly the rotation it was in 1915, because we have all been growing more cereals in Scotland. We have been advised to produce more cereals.

10,512. Did the hay do well?—Hay pays well enough this year.

10,513. Did it pay well under pre-war conditions, and at pre-war prices?—No, it was not a very good paying thing in pre-war days.

10,514. Because, looking at the figures for the pre-war season, one would imagine that if the main products were cereals and you had not got any profit on your beef or mutton, you would have very little profit on the farm?—Before the war we had very little profit.

10,515. You could not tell us what percentage it would represent on the capital?—I am sorry I cannot.

10,516. You have been asked some questions about your general method of costing by taking the total costs of manure, labour, and horse labour, and spreading them over the total acreage of land. I take it your general impression is, that it is a much more reliable method of procedure than to state the number of hypothetical operations and price those?—Yes.

10,517. I am inclined to agree. Under those circumstances, would not it have been advisable, in your view, to have distributed the cost rather differently between, say, the wheat, the barley, and the oats on one hand or even between those three and between the potato crop and the root crop on the other?—I could not do that. I had no means of allocation, otherwise it would have been very misleading. I could only make the statement I have made again, that the potato crop is the most expensive crop and the hay crop is the least expensive; so that you must apply what you save in making hay in labour, and carry it over to the potato crop.

10,518. Yes, that more or less balances; but if you use this method for arriving at a basis for calculating what minimum you require, are you not rather doing an injustice to your cereal crops, because your potato crop, for instance, would require much more horse power and much more manual labour, and, on the other hand, your receipts for your potato crop would be much higher per acre than for your cereal crop?—Yes; but on the other hand, whereas cereal crops get the benefit from the green crops, that ought to be taken into consideration too. So that you would require to credit the green crops with so much of the cleaning operations that benefit your grain crop.

10,519. That brings me to one or two questions I wish to put to you. What, exactly, does dung exhaustion mean in these tables?—It means that you give so much dung to your potato crop. That is the way we do it in Scotland. Then the wheat follows, and it naturally follows that if the wheat is the first crop after the crop that has received the farmyard manure, it takes a greater quantity of it, and leaves less for the succeeding crops.

10,520. I understand the principle. From what I can see from your table, you credit your cereal crops with the total value of all the straw, do you not?—Yes, I credit the cereal crop with straw, according to its value.

10,521. But surely you would not get much more than 35 cwt. of straw on the wheat crop?—We get, as I have stated, 35 cwt.

10,522. But that is the whole of the straw crop?—Yes.

10,523. And you credit the whole of the straw crop to the wheat?—Yes, I do.

10,524. At market prices?—At market prices, as near as I can arrive at them.

10,525. Supposing you are calculating, as I expect you have calculated, the cost of feeding your beef, would you debit them with the straw at market

prices?—I think so. If you were producing beef, you would be entitled to put that charge against it.

10,526. I understood you to say, in answer to Mr. Cautley, that on your farm the threshing machine was your own?—Yes.

10,527. Is not that true of most farms in your district?—No, it is not. I think it will only be true as regards 50 per cent. of them.

10,528. But as many as 50 per cent.?—Yes, as many as 50 per cent.

10,529. That, of course, alters the position, and makes it an entirely different one to that prevailing in this country, where the travelling thresher does, say, 80 or 90 per cent.?—We have not quite as much unless you go amongst smaller farms. Then, of course, it is all done by the travelling thresher.

10,530. You said, in answer to Mr. Cautley, that you felt quite certain that at the end of the war, whatever that may mean, under present circumstances prices were going to fall. Could you give us any reason why you think prices are going to fall?—The reason I would give is, that the facilities now for transporting foodstuffs and farm produce from foreign ports are enormous, and as soon as they get into proper working order they are bound to reduce prices of farm produce.

10,531. You do not anticipate any big demand from other European countries to take part of the supplies that normally comes here?—Those will soon rectify themselves too, and there is one thing a farmer has to face. He will be losing his market pretty much for hay. The internal combustion engine is now taking the place of horses in the towns, and he would not have the same market for his oats and his hay. We must face that, too.

10,532. He would not have the same market for his hay; but do you regard the loss of the market for hay as a real disadvantage?—Yes, I do. So far as Scotland is concerned with regard to hay and oats, the loss of the market for oats is going to be a serious matter.

10,533. You stated just now that your Chamber had only very recently begun to consider this question of guaranteed prices: is that so? Of course we considered the Corn Production Act, and we were in favour of it; but just now we have had very little time to go into the matter possibly as fully as we ought to have done.

10,534. Do you remember a Committee that was set up early in the war period, to consider supplies and production of cereal crops in Scotland similar to the Milner Committee in England?—No, I do not recollect it so far as Scotland is concerned. I do not think we had it I am not familiar with it.

10,535. Are not you familiar with the fact that at that time, I think it was in 1916, there was no demand on the part of Scottish farmers, or exceedingly little demand, for a guaranteed price?—So far as I know, there were no costs of production, so far as cereals were concerned produced at all. There was in the case of potatoes.

10,536. Should I be correct in saying that the demand of the Scottish farmers for guaranteed prices is of very recent growth indeed?—It is not of recent growth; because we have always seen that unless something of that kind was taken in hand, agriculture was going to be swamped altogether.

10,537. Still, I put it to you that, so far as there is a real demand, it is a demand that has developed within the last year, or let me say 18 months?—Yes, about that.

10,538. What is the real reason for it?—The real reason is that the costs of producing farm produce have so enormously risen and farmers have a recollection of what took place in the past, and they do not see anything to prevent the same circumstances happening again in the future; that is what we are anxious about.

10,539. But are not Scotch farmers rather proud of their industry?—Yes: but you cannot work a losing concern

10,540. No, you cannot work a losing concern, and nobody can; but I think Scotch farmers would be the last to say they would not try to work a concern that other people say is a losing one. Is not that so? I know that in Scotland in the latter end of the seventies, there were a great many Scotch farmers came to bankruptcy; and much later than that. We have had a very hard time of it.

10,541. Yes; and they came to England as well as to bankruptcy?—Possibly they knew they were going to something better; the conditions in Scotland were much harder.

10,542. But surely it has been one of the causes of pride in the Scotch farmer that he was able to maintain his arable crop and run his business under fairly good conditions, and also to pay his workmen better wages than the English farmers were paying theirs in the period prior to the war?—I do not think there is either an English farmer or a Scotch farmer who could produce wheat at 20s. a quarter; and that was the price in 1894.

10,543. So that, according to your statements, the real reason for the demand for a guarantee comes to this: that wages have risen, that you are not sure that prices are going to be maintained at their present level, and you have a little uncertainty as regards the future?—Yes, we have.

10,544. You are not quite prepared to face it on your own responsibility?—We are not.

10,545. Would you be prepared to face it on your own responsibility if the public did not make any particular demands as to what you should produce?—No. We are not prepared to take it on those conditions at all.

10,546. Not under any conditions whatever?—No, not under conditions whatever. We cannot possibly expect our ploughmen to work for a less wage than other people are getting round about; and if the prices fall there is no other alternative but we must reduce our ploughmen's wage or go without.

10,547. From your point of view it is absolutely essential that you have a guarantee?—It is absolutely essential that we should have a sufficient price for our produce that will enable us to make ends meet.

10,548. And the only way that you can do that is by a guarantee, practically speaking?—We think so.

10,549. If you are assured by an authority on constitutional law and practice that there is absolutely nothing binding in any Act of Parliament which might give you a guarantee for five years in the case of a change of Government, what would be your attitude then?—Our attitude would be that if they did not fulfil the obligation of the previous Government the whole thing would go to wreck. That would be the idea.

10,550. And would not the position then be rather worse than if you had taken conditions as you found them, and organised your business so as to comply with them, and still yield you a living profit?—No, we cannot do it. Unless we had sufficient guarantee, we cannot produce grain. We can allow the land to go to grass and reduce our labour and other expenses, but that is not altogether in the interests of the country. Cereals and green crops are of far more value to the country than grass; and if they want us to cultivate the soil they must make provision for it.

10,551. Turning to the question of the sliding scale which you mentioned in answer to Mr. Cautley, would you include in that idea of a sliding scale, which I presume you meant to apply to wages, an absolute minimum of wages, beyond which they could never fall, no matter what prices were?—I have no objections to that.

10,552. What would you suggest such a minimum should be?—It would be very difficult to do that; because the cost of living would require to be taken into consideration.

10,553. You are fully aware that in other cases in industry in which there has been a sliding scale, there has always been a basic minimum?—Yes; but you have to fix your minimum wage pretty much as to the cost of living. I do not see how you can get out of that.

10,554. It does not matter which way you put it, whether wages go with prices or prices go with wages. In any case, as far as labour is concerned, you must have a basic minimum below which they will never fall. You are aware, I take it, that even when you have a basic minimum in a sliding scale, that is subject to change and in some cases a fairly big change?—Yes, of course.

10,555. So that, in any case, the Scottish farmers have to consider the very best ways of organising their farms from their own point of view, whether you get a guarantee or not, because you will always have wages pressing you rather hardly?—Of course a farmer will farm his farm for profit.

10,556. *Mr. Batchelor*: In your wages statement, should you not put in the allowance for the houses of the men?—It is part of the rent of the farm, and that is included in the rent.

10,557. Yes; but it does not show exactly what you are paying in the way of wages?—We considered that we have it in as rent.

10,558. Now to come to the question of rent, I think you have already told us that the figures for 1918 and 1919 are not actually figures of your own rent?—No.

10,559. Could you tell us what the actual figures should be?—Would £1 14s. 1d. be the same?—Yes.

10,560. With regard to the potatoes that you put in, I see in 1913 you put 50s. a ton. Was that supposed to be the market value in 1913?—Yes.

10,561. I happen to have the Board of Agriculture for Scotland Returns here, and they show the average price of main crop potatoes, other than red soil, for 1913, were 67s. a ton?—I took it at 50s.

10,562. Then I see you have taken 1918 and 1919 as working out to £6 5s. a ton; so that that is under market price?—We have to supply the men when the potatoes are lifted, so that I think the price there might stand.

10,563. In regard to your wages, do you drive coal for your men?—Yes, I do.

10,564. And do you do the flitting of your married men?—We do.

10,565. Of course I can understand you have not put them in, because they come under the working of the farm; but from the point of view of the actual wages that the men cost you, they should go in there?—Yes.

10,566. Will you look at the item "National Insurance and Workmen's Compensation" which you have at £27 in 1918, and which you put up to £30 in 1919? Why do you put it up?—The wages have gone up, and it is 20s. per £100, I think, that we pay under the Workmen's Compensation Act.

10,567. Then do your repairs and general smith work include all joiner's account?—No, joinery comes under the depreciation of implements.

10,568. Have you any allowance at all in the event of the death of a horse?—Yes, I take that into the depreciation of horses.

10,569. You have depreciation of horses, 9s. per acre on 374 acres, which comes to £168 6s. for 14 horses, which is £12 each. Is that sufficient to cover deaths as well as depreciation?—I think it might be sufficient. I do not think it is overstated; but at the same time I think it is a fair estimate.

10,570. If you were buying a horse just now for your farm, what would it cost?—It might cost me £150.

10,571. Do you think £12 is a sufficient amount to cover the depreciation of that horse?—I think it might stand at that. It is not high.

10,572. Now come to Table II. I would like to ask you a question or two on this matter of dung exhaustion. You have told us the potatoes are dunged with farmyard manure. What quantity do they get?—It is usually from 18 to 20 tons to the acre.

10,573. Have you any idea what price you are putting against that?—It is a very difficult thing to estimate the price of dung. I believe it is costing the farmer just now a big sum.

10,574. What I want to know is, how do you get the figure worked out to £2 10s.?—I will tell you how I took it. I took £15 for an acre of potatoes to dung the land; and when you grow your potatoes there were two-thirds of that exhausted with the potatoes. Then there is £5 to spread among the other crops.

10,575. That is going on the assumption that there is no dung given to any other crop?—The wheat would get it, and then the hay would follow; but there is no dung charged.

10,576. That dung would have been made from the straw?—Yes.

10,577. Do you observe that your only charge against the wheat crop is £2 10s. for dung exhaustion, but you give it credit for £4 7s. 6d. straw?—Yes, the market price.

10,578. So that you have grown your wheat crop, and instead of costing you anything for dung you have £1 17s. 6d. in hand through your straw. How do you get that?—I have put down what I consider the exhaustion, and then I have credited the cost of producing the crop with straw. I do not see any other way that I could do it.

10,579. You will notice that you have one item, the cost of production of grain; but in arriving at the cost of production, you deduct one item which is not the cost but which is a sale market price. Do you actually sell it?—Yes, I do actually sell.

10,580. Not the whole of the straw?—Not the whole of the straw, but the great proportion of it.

10,581. You are putting in as a value not only the price of what you do sell, but a similar price for what you do not sell?—That price ought to go against the dung, because that is the value of the straw. You ought to put that price against the dung. You cannot count what it costs to make the dung, and you will find that is a very large item.

10,582. But you see, you have very much more than wiped out the dung by the straw, as far as the cereal crops are concerned?—Yes.

10,583. In other words, your wheat would cost you more to grow if you had not so dealt with your dung exhaustion, and given it credit for the market price of the whole of the straw?—That is so.

10,584. Then to deal with these costs of growing potatoes*, the one in Ayrshire, I notice, for the 1919 crop, uses 30 cwt. of seed. Do you know if that is an actual fact or if it is an estimate?—I am sure I cannot tell.

10,585. Do you know what the yield per acre would be in that case?—I should say it might begin at anything from about 4 tons per acre, and finish up with 8 tons per acre.

10,586. Do you know whose estimate this is?—Yes, I do.

10,587. Will you be prepared to tell us whose it is?—I do not see why I should withhold it: it is Mr. Hannah's of Girvan Mains.

10,588. He is a very big grower, is he not?—Yes, he is.

10,589. Then take the Forfarshire statement.* One is stated to be for the 1918 crop. Is the other for the 1918 crop?—Yes, I think so.

10,590. In the one case the seed is apparently 1 ton; and, in the other case, 22 cwt.?—Yes.

10,591. I notice in the case where it is 22 cwt., or at least I infer the yield is 5 tons, because they talk of "dressing potatoes out of pits, say 5 tons." Would that be an average yield for 1918 in Forfarshire?—It would be under the average, I think.

Chairman: I should not wonder if it does not apply to the 1919 crop, as it is headed: "Estimated cost of crop, September, 1919."

10,592. *Mr. Batchelor*: Do you know the details of these sufficiently?—I have not looked into them. I think that was left to Mr. Mercer to deal with. (*Mr. Mercer*): We only got the statement the other day, and I had not had the chance of examining it any more than you.

10,593. There is only one other question with regard to the estimated cost of production for Forfarshire, and that is chemical manure, 8 cwt. at 11s. 6d. From that is deducted 25 per cent. Is the intention that there is a residual value left from that chemical manure?—That is so.

10,594. Do you know what that kind of manure is?—I have no idea; but I expect bones, etc.

* *See* Appendix No. III

10,595. Would you suggest that that is a reasonable allowance for the class of manure?—I think it will be quite ample.

10,596. Do not you think it is too much?—It may be a little over. (*Mr. Armour*): I should say so.

10,597. *Mr. Overman*: Mr. Duncan told you that when you fixed your wages in May last, you were fixing them without having any guarantee from the Government; are you agreed?—Yes.

10,598. Do you not think you were wrong in that answer?—It would have been very wrong to have done anything else, because we could not have got the men.

10,599. Your answer was that you agreed with Mr. Duncan. I put it to you that you had the promise of the Government at that date that the maximum price for cereals in 1918 should be the minimum price in 1919?—I do not know whether we had the guarantee or not at that time, but it was talked about.

10,600. The promise was there from the Government, that the maximum price of the 1918 crop should be the minimum price of the 1919 crop. That was in November. You did know that if you carry your memory back. The promise was given in November, 1918, with a free market?—We had an idea that the promise was given; but we had no idea that the Government was at the back of the promise.

10,601. In fact you did not trust the Government?—I would not go that length; but we had to face a veto on it.

10,602. I can tell you the promise was there?—(*Mr. Mercer*) There were many farmers who were not trusting this promise at that time, as we all know.

10,603. Mr. Duncan also asked you something on your labour bill. He could not understand why you were able to do the work with less hours and less men?—(*Mr. Armour*) As I have explained to you, we gradually find that we have left undone work that we ought to have done; and, as I explained before, we were relieved of the carting of straw and hay to a market 10 miles away.

10,604. But do not you think the answer to that question is given in the last paragraph but one of your statement, that much of the land is dirty and will require extra expense for cleaning?—Yes, I agree. It has got dirty on that account.

10,605. I take it your fences are, like other people's, grown up, and work has been left undone that should have been done?—I agree; that is so.

10,606. Taking your farm alone, what do you estimate it will cost per acre to put your land back into the condition it was in in 1913, say?—It will take anything from £2 to £4 the acre.

10,607. I think that answers the question with regard to how the work has been done, with less money and less hours?—Yes.

10,608. In the last paragraph of your précis, you say you attach great importance to an adequate guaranteed price being provided for oats. As Mr. Cautley pointed out to you, you evidently think a great deal more of oats than you do of anything else?—We would like oats to receive favourable consideration, as we grow a great deal more oats than wheat.

10,609. Carrying your point of view a little farther, do you think that if you on your farm can only grow six quarters of oats to the acre, you are able to grow five quarters of wheat?—Yes, when we grow potatoes.

10,610. What is the biggest crop of oats you ever grew?—The biggest crop of oats I ever grew was eleven quarters.

10,611. What is the smallest?—The smallest I have ever grown is possibly down to two; but I only once grew eleven quarters of oats.

10,612. Would not you say that your average crop of oats was more likely to be seven and eight than six?—No.

10,613. Not if you are able to grow five quarters of wheat to the acre?—Yes; we are able to grow five quarters of wheat because we are growing it on the best land and under the best conditions.

10,614. And you put your barley at five quarters?—Yes.

10,615. Do you sell any of your straw from this farm at all?—I do.

10,616. What proportion do you sell?—I could hardly answer the question, but I think fully half is sold.

10,617. And the rest you put into manure by cattle?—Yes.

10,618. *Mr. Rae*: Mr. Cautley, I think it was, asked you on the question of interest, and suggested that you were not charging enough latterly because of the increase in capital, and you agreed to that?—Yes, I think so.

10,619. Do not you think there is a further point; that before the war money was only worth 3½ to 4 per cent. for investment, whereas now you can get 5½ per cent. in Government securities, so that a still further increase might be charged against it on that account?—I am afraid you could not get money to carry on a farm at those figures. I do not think you would get money to carry on a farm at less than 5 per cent. at any time, even pre-war.

10,620. If you could not get it at less than 5 per cent. then you would not get it under 7 per cent. now?—No, you would not.

10,621. I mean, there is a considerable increase due on account on the increase of capital and the increase on the price to get it?—Yes; my estimate ought to have been higher there.

10,622. What is the nature of your land? Is it mostly light land?—No, it is stiff heavy land.

10,623. Really stiff clay land?—Yes, it is heavy land to plough.

10,624. Still, you can plough it with two horses?—Yes, two horses will do it; but it takes two heavy horses to do it.

10,625. Is yours a four-course rotation?—Yes.

10,626. I do not quite understand from the figures how it is. Do you take potatoes or roots?—Yes, and then wheat or barley.

10,627. You take potatoes?—Yes.

10,628. Then wheat or barley?—Yes.

10,629. Then you sow down again?—Yes, hay.

10,630. Do you feed many turnips on the land?—My land is too heavy for that. I have often to consume them in the courts, or find a market for them and buy manure in their place.

10,631. Do you apply the manure to the fallow land?—Yes, the potato land.

10,632. And the residue grows the wheat crop?—Exactly.

10,633. You grow your wheat on the best part of your root break, and the barley on the turnip break?—Yes.

10,634. Wheat after potatoes, and barley after turnips?—Yes.

10,635. So that the wheat really gets the best conditions?—Yes.

10,636. And that accounts for it being as high a return as the barley?—Yes. I might say I think that there ought to be so much credited from the potato crop and debited to the wheat.

10,637. For the extra cultivation?—Yes.

10,638. You suggest a guarantee for five years. Do you think that is long enough?—I have no objection to putting it longer.

10,639. For the sake of giving confidence?—Yes; but five years would enable us to turn about and see how things were going to drift.

10,640. But do you agree that the war has shown us that if the country is to be saved in the future we must grow a great deal more cereals than we did in the past?—There is no doubt we must have a great deal more of the land under cultivation, for the safety of the country and for the benefit of the industrial classes.

10,641. That is the point I wanted. Therefore, seeing that the farmer simply from his own selfish point of view can make as much profit from grass farming, or at any rate a considerable amount of grass farming, as from tillage, do you think this guarantee is necessary for the benefit of the farmer or for the benefit of the consumer?—I think it is for the benefit of the nation as a whole. I do not think it is to the interests of the country to allow the land to lie derelict without producing the best it can, and the Government ought to make arrangements to see that it is done.

10,642. And therefore this guarantee, if it were carried out, would be for the benefit of the general public, and not for the benefit of the farmer?—I agree.

10,643. Do you think that along with the guarantee, it would be fair to stipulate there should be a certain area of land kept under crop?—Certainly.

10,644. I mean a man could not reduce his arable area and still claim the benefits of the guarantee?—No; I would not allow that.

10,645. You say that you have mostly 14 years leases, with breaks in them. Are those breaks on both sides, or only on the farmers' side?—They are on both sides as a general rule; but most of the leases now are 14 years without a break on good estates.

10,646. The system of breaking is dying out, is it?—Yes, on good estates.

10,647. With regard to the new Education Act; I expect you agree that education is good for the people, and you want to get them as well educated as you can?—Yes.

10,648. But do you see difficulties in the way? It will mean that boys and girls cannot go to work on the land until they get older than they are at present?—Yes, that is what we think.

10,649. Have you any fear that as they get older they will get more disinclined to take to farm life?—That is the case. We find the best age to get a boy on the farm is about 13. If you allow him to get to 15, then he has no inclination to go on the land. He is attracted to the land by the animals on it at the age of 13; but when he gets to play games of football, and that kind of thing, he has no notion of the land, and he will not come to it.

10,650. And it might lead to an increased shortage of labour?—It will lead to an increased shortage of labour, and throw us more on to men and women.

10,651. Can you suggest any remedy for that?—I am sorry I cannot suggest a remedy for it, but I have no doubt that is how it will operate.

10,652. On the question of wages, I think your statutory minimum was stated to be 36s?—Yes.

10,653. But the perquisites are in addition to that; they are not included in that?—Yes, they are included in it.

10,654. But you are actually paying 44s., with perquisites in addition?—Yes, that is so.

10,655. I thought in Scotland perquisites were counted in addition, under the Wages Order?—No, they are included.

10,656. With regard to your horses' keep in Table No. 1, I see you are charging just the same rate this year as you did last. Is that correct, do you think?—I did not see that I could charge any other rate: because while hay just now is at abnormal prices, I did not feel justified in putting it down.

10,657. You calculate it the same as last year?—Yes.

10,658. And it is the same?—Yes.

10,659. You have not taken the market rise?—No, I have not.

10,660. And the reapers and general smiths' work in the same way?—Exactly.

10,661. Have not the blacksmiths raised their rate?—Yes, they have. The rates have been up for a considerable time with the blacksmiths.

10,662. They are up a lot to what they were; but have not you had a further recent rise?—No, not up to now that I know of.

10,663. We had one two months ago, and I thought probably you had had the same. To make up for the shortage of hours, because you are losing 6 hours a week at least, do you think you will have to make good that shortage by employing more hands, or can it be done by an increased use of machinery?—So far as we can see just now, we will require to employ more hands to do the work.

10,664. You think it can be substituted by an increased use of machinery?—We have either to employ more hands, or pay overtime; and of course in paying overtime you are possibly getting the use of your horses for a longer time. We find the men do not like to work overtime, especially on a Saturday.

10,665. I agree. What about tractors? Have you tried them?—I have employed them, but I have not any of my own.

10,666. Do you think they will be able to take a really useful place?—I think so. I think there is some prospect of that.

10,667. And reduce the amount of horse labour?—I think there might be some reduction; but not to the same extent as you would think, because you require the horses in harvest time, and you must have horses about the place to do the work in the seasons. If you have not, then you lose far more than you gain by not having them.

10,668. There is something in that; but I think you can work it in with a fewer number of horses?—I think I could.

10,669. I think you said you had 14 horses now—six pairs and two odd ones?—Yes. I might do without a pair.

10,670. That would save a pair of horses, because a tractor is not eating when it is not working?—Yes; but the wear and tear of a tractor is very considerable. (*Mr. Mercer*): And you can often work with horses when you could not put a tractor on the land. We have had that experience in our district.

10,671. You divide your costing equally for all crops?—(*Mr. Armour*): I do.

10,672. Do you think it is possible to get at the costings of individual crops?—I do not think so. I do not think you would get farmers to do it. They have not the time to do it, for one thing.

10,673. Do you think it would be worth anything if it were done?—I do not think it would be worth anything, even if it were done.

10,674. Really the true way is, to take the average of your rotation?—Yes. I will give you an example of what I mean. We were stopped harvest operations on Friday. There was nothing done by anybody on the farm. Then there was nothing done on Saturday, and on Monday we could only set up stooks. A farmer could get nothing out of them because it was setting up stooks, and it was wet. There were three days lost. What are you going to put that to? These are the losses farmers have to make up. If we could work our business as a factory, which opens its gates at 6 o'clock and shuts them at 6, then we could estimate pretty nearly what it would take to produce any article. But you see we have to contend with the weather.

10,675. The weather is always our master. What do you calculate is the extra time taken for stable work by a man?—I think it will amount to nearly three-quarters of an hour to an hour a day.

10,676. You think that will be it?—Yes.

10,677. And the time when the horses are actually in the stable?—Yes.

10,678. Of course, when they are running out it would be nothing, so the average of the year would be less than that?—There is less with the running out.

10,679. *Dr. Douglas*: There are one or two questions on the evidence you have already given that I should like to get cleared up. Do Scotch farmers on the whole desire to continue to arrange 14-year leases?—I think they do.

10,680. They feel their lease to be a desirable protection?—They do.

10,681. And there is no tendency on their part to go to an annual lease or any short arrangement of that kind?—No, we do not want an annual lease.

10,682. On the question of some control as a condition of guarantee, I think you agree that if the State is to give a guarantee to secure a supply of cereal crops, it must take some steps to see it gets a return for that?—Yes, I agree.

10,683. But do you agree that a condition that there shall be good farming will satisfactorily secure that?—That is so.

10,684. There would not be good farming in ordinary rotations unless there was a certain amount of cereal cultivation?—No; I do not think you would get the best out of the land unless you had a considerable amount of the land under cereals.

10,685. So that that would be an element in good farming?—Yes; and if they were to give a guarantee

for prices, they would of course require to see they were getting the best results for it.

10,686. Mr. Cautley examined you on the question of the prices of wheat and oats. Are you aware that the public statistics show that in Scotland the production of wheat is greater to the acre than in England?—I believe that is so.

10,687. While, on the other hand, the same figures show that the production of oats to the acre is less?—Yes, I would imagine that.

10,688. Do you think the explanation of that is that in Scotland only the best land is used for wheat?—That is so.

10,689. While oats are grown wherever a crop can be taken at all?—Yes; poor land.

10,690. So therefore the statistics from the two countries are not comparable?—No.

10,691. And there is a fallacy inherent in them?—I agree.

10,692. Do you think that, so far as Scotch production is concerned, it is very desirable to encourage an increase in the production of wheat: do you think that would be politic?—No, I do not think so.

10,693. You think on the whole the Scotch country is more suitable for oat growing?—Yes, I think so.

10,694. Therefore it would be a mistake, as far as the Scotch industry is concerned, to give a guarantee to divert land from oats to wheat?—I think so.

10,695. I want to ask you one or two questions about the general policy of the Chamber as to the guarantee. Would you prefer that I should put these questions to Mr. Mercer?—I would.

10,696. Then, Mr. Mercer, you were questioned by Mr. Ashby regarding any demand from Scottish farmers for guarantee. Would you say that there is not any demand from Scottish farmers for guarantee? Did they ever initiate any demand for guarantee?—(*Mr. Mercer*): No, I do not think so.

10,697. Do you remember the proceedings of the Departmental Committee, generally called the "Wason Committee," in 1916?—I remember something of that.

10,698. Did any Scotch witnesses at that time initiate in their evidence the question of guarantee?—Not that I recollect at all.

10,699. You do not think that happened at all?—No. I think Scotch farmers, as a whole, would have been pleased to have been let alone altogether. I think that was the position.

10,700. Do you think it is the case that the first serious discussion of guarantees in Scotland took place after the first report of the Selborne Committee in 1917?—Yes. I think that was just about the time that the matter began really to be looked into.

10,701. And the idea, I think, was not very favourably received?—Not at all.

10,702. There was no enthusiasm?—None.

10,703. What is the chief event that has happened since, so far as cereal production is concerned? Has it been the great increase in cost between 1917 and the present time?—The increase of cost has been very great since 1917.

10,704. Has it come to be the general opinion of farmers that if these costs are to continue they must have some security against the return of prices to their old level?—That is what has brought about this feeling.

10,705. That has been the history of opinion in Scotland?—The history of opinion in Scotland is that the costs have gone very high, and the farmers naturally, seeing that the war is over, fear a big fall in prices.

10,706. I am coming to that point. I want to ask you first, has any responsible body of Scotch farmers, within your knowledge, ever put forward a demand for a guarantee as anything that they were entitled to? Would you rather I limited my question to the action of the Chamber?—I do not think any responsible body have put that forward.

10,707. Have the Chamber of Agriculture ever done so?—No.

10,708. Can you refer me to anything?—What is your question exactly?

10,709. Whether the Chamber of Agriculture have ever said that apart from State policy and the demands of the public, farmers themselves were entitled to claim any special preferential guarantee for their industry?—I think the whole argument has been State policy. That was the point all through.

10,710. And you say still that farmers would have been very well satisfied to have been left alone?—Yes.

10,711. You say that farmers expect that there will be a very sharp fall in prices as a result of the conclusion of Peace. Is that what you say?—Yes.

10,712. Do you think that belief is general?—It is very varied, even at this moment.

10,713. Do you yourself think it well founded?—I think there is bound to come a fall; I do not say that it will come immediately.

10,714. With regard to costs, is there any expectation or desire on the part of the Scotch farmers for a return to the previous wages conditions?—No, none.

10,715. Is your view, or the view of the Chamber, that the position of the Scotch servants is much stronger in respect of their demand for wages than it formerly was?—Do you mean that they are insisting more strongly?

10,716. I mean they are adopting much more of a Trades Union point of view?—Certainly they are.

10,717. And they are coming much more in contact with the industrial population?—Much more; and naturally the contact has its influence on them.

10,718. And I suppose the war has greatly increased that?—Yes, I should say so.

10,719. So that farmers in Scotland, on the whole, expect that they will have to maintain a comparatively high rate of wages if they are to secure labour?—That is so; and I think I might say that the farmers are very willing to maintain as high a rate of wages as the industry will allow. We do not want to see wages go down.

10,720. Do you think farmers in recent years have become rather more liberal in their views on that subject?—I hope so. I have always held these views myself.

10,721. Yes, but generally?—I hope so.

10,722. As a matter of business, they say if that is to happen and if prices are to fall, they cannot hope to maintain production?—That is certainly the case.

10,723. Is that the substance of their case when they say that cultivation will decline if there is no guarantee against the return to very low prices?—That is so. That is the general feeling in so far as I know it in Scotland, that there will be a tendency to put land again under grass if the prices of cereals fall too low.

10,724. But I suppose farmers could do quite well in many cases with their land back in grass?—Yes, many of them would. It is not from the farming point of view.

10,725. They have not a very vital interest in maintaining cereal cultivation?—In many instances they have not, and farm life would be very much easier with the land under grass.

10,726. I should like you to come a little closer to the question of what is meant by a guarantee. There are two possible views of it, and I want to know which it is that you believe the Chamber to hold. There is the view that such a guarantee should be given as would enable farmers to carry on their present methods, even if world prices were to fall for long periods below the level of the guarantee. There is the other view that the guarantee should be on a level to be required only exceptionally and occasionally, as a safeguard against such prices as belong to certain years in the early nineties. Which is the view of the Chamber?—The view of the Chamber is that a guarantee over a period of years would be more satisfactory.

10,727. But, of course, the level at which the guarantee would be fixed, would depend on which view you took? The level of the guarantee would be available from year to year. I think that is our suggestion.

10,728. You have not considered any scheme regarding the responsible Committee that was spoken of?—No.

10,729. You prepared your present evidence, I think, rather in view of the immediate question of the necessary prices for the year 1920?—That is quite so. It was just with that view.

10,729A. If you are required at a later stage, you would be prepared to consider that?—Certainly, we would do that at once.

10,730. I think you said that the Chamber has been considering the question of guarantees for other than cereal crops. I am not going to ask you any questions in detail on that subject; but is not it the case that there would be great difficulty in administering guarantees in respect of other crops? Would you contemplate that being done by the method of the Corn Production Act in the case of, say, milk, or would it entail a system of State purchase?—I almost fear it would need a system of State purchase; but I would not like to commit the Chamber.

10,731. Do you think a system of State purchase with the consequence of a fixed maximum price as well as a fixed minimum price, would encourage them to produce?—It is very doubtful if that would. The experience we have had of State purchase this last year has not helped it at all.

10,732. It has been somewhat mixed?—Yes, that is so, very mixed.

10,733. You do not think the production would be encouraged by a system involving purchase by the State of the various products?—No, it is very doubtful if it would.

10,734. And, therefore, it would not have the justification which is necessary for the guarantee system?—That is so. Unless it would ensure increased production then the thing is not doing what is wanted.

10,735. And you do not think it would ensure increased production?—I have very grave doubts about it, speaking personally.

10,736. *Mr. Walker*: I want to ask you if I understood you correctly, when you expressed the view of the Chamber, that they desired to be left alone entirely. How do you reconcile that statement with the claim put forward on behalf of the Chamber for guarantees?—This claim is put forward now. The time when we were wishing to be left alone entirely, was two years or so ago. The circumstances have changed.

10,737. Do I understand correctly that now you are not desirous of being left alone?—Certainly, we wish to be looked after. We now have to consider the costs of production as they are to-day, and if the growth of cereals is to be maintained we do now wish a guarantee.

10,738. So that to that extent you do not desire to be left alone?—No, not at this stage. It was earlier that we wished to be left alone.

10,739. I believe it was Mr. Armour, in reply to Mr. Edwards, I think, who stated that if certain things happened the whole of the land would go out of cultivation. Might I ask you, Mr. Armour, if you really mean the whole of the land would go out of cultivation?—(*Mr. Armour*): If the land did not produce a profit for the men who cultivated it, it would certainly go out of cultivation.

10,740. In your evidence-in-chief you give certain figures; for instance, wheat per quarter of 504 lbs. you put at 58s., and that you state would be without providing any profit?—Quite so.

10,741. I did not quite follow myself exactly what you required over and above that figure named for a profit?—I think I stated 10s. an acre.

10,742. Do you keep accounts?—I do.

10,743. Do you pay income tax?—I do.

10,744. On what?—I just pay about half of my rent in income tax and the landlord pays the other half.

10,745. You do not pay it on profits?—No.

10,746. Would it be correct to say that most farmers adopt that way of paying income tax?—Yes, I think that would be correct.

10,747. Rather than pay on profits?—Yes.

10,748. So that income tax is a bad index?—I think so; but if the Government continues to levy tax on double rent, I think you will find that the present generation of farmers will go out of farming. Farmers are not clerks. Their duty is to produce, and is outside looking after the crops. You will not get farmers to sit down at night and write up their books and make balance sheets, as a general rule.

10,749. It is perfectly obvious, I think, that farmers are not book-keepers?—They are book-keepers, but they are not clerks. They keep books to their own satisfaction.

10,750. Is it your view that that is the reason why you choose to pay income tax on the rent instead of paying it on profit: is that the actual reason?—Yes, that is the actual reason.

10,751. There is no other reason?—There is no other reason.

10,752. But, at any rate, repeating my question, am I correct in my estimation that most farmers adopt that plan?—I think you are right.

10,753. Dealing with education in the next paragraph, you do not of course as a Scotsman object to the best education possibly being given to the farmers' sons?—Certainly not.

10,754. You give it, however, as one of the reasons. I am inclined to think it may be misunderstood from the way it is put here?—I think it is.

10,755. It is subject to misinterpretation; but you do not mean it in that way?—I do not mean it that way. I mean it is a mistake to keep boys at school and at the continuation classes marking time. If a boy can do good at the school and take in the instruction then I am all with it; but a boy who has to attend school and can do no good but sit and kick his feet under the desk I am all against.

10,756. But it would be a good thing for the industry if we had a higher standard of education than we have to-day in Scotland?—Yes, I agree. (*Mr. Mercer*): Is that paragraph (8) you are looking at, because increased education comes in there, and I thought perhaps you were not reading it quite correctly. It is: "Increased education and other local rates."

10,757. It is paragraph (8) of my copy?—If that is the paragraph you mean we are not raising any objection to education, but it is the rates. I wish that to be clear.

10,758. I wished to make the point clear?—Yes, I am glad you raised the point.

10,759. Is it really the view of the Chamber that permanent guarantees should be given?—(*Mr. Armour*): So long as they are necessary, I think they ought to be given. I think the land ought to be put under proper cultivation and a great deal more of it than we have under cultivation just now; and if the country wants that they have to make arrangements for it.

10,760. With your experience particularly, considering the part from which you come, would you hold the view that we could produce sufficient cereals in this country to meet this country's demands and requirements?—I think it would be impossible to produce the whole of them; but I think we could go a great length in producing our requirements in regard to cereals. We will never be able to supply all the cereals because we have a great many industries that use cereals, such as brewing, distilling, and that kind. I do not think we could do that; but so far as feeding the population is concerned, I think if the land were put under proper cultivation and an extended area of it, we could go a long way towards supplying the food that is required for the country.

10,761. So that really in due time you think we might be able to?—I do.

10,762. Taking the examination generally, and the questions that have been put, is there anything else that you could suggest whereby we might be able to improve the status of the industry?—No; the only way you can improve it is to give sufficient remuneration to the labourer and the farmer on the soil.

10,763. Take transport, for example?—Yes, I agree. All those things could be brought in.

10,764. You think there is room for those improvements, so far as that is concerned?—Yes, I do. (*Mr. Mercer*): And research.

10,765. Anything else?—Communications also. (*Mr. Armour*): And education, too. All these things will tend to production, but you must have a profit at the far end.

10,766. What is your view of co-operation in the industry? Do you think there is room for greater co-operation? I think co-operation is a very good thing.

10,767. In buying and selling? Yes, in buying and selling, and helping one another. I believe it will ultimately extend; but at present a great many of the farmers are not open to receive it yet, though I believe they would be the better for it.

10,768. That is your opinion? Yes.

10,769. *Mr. Smith*: With regard to these figures that you have presented as to the cost of the potato crop in Forfarshire for 1918,* is there any information as to what that crop was?—Will you address your remarks on the potato crop to Mr. Mercer?

10,770. Could you tell us what the crop was, Mr. Mercer? (*Mr. Mercer*): I am afraid we can give you very little information on those tables to-day.

10,771. Would it not be possible to have the information later?—Yes; I think it will be possible to have all the information later, but I only got this yesterday morning.

10,772. At what price were they sold? This is just the statement from the farmer himself.

10,773. I see in the statement regarding the Ayrshire early markets, you put down the rent, rates and taxes for three-fourths of the year. What is the reason for that? The reason, I believe, is that after the potatoes are taken off, a crop of rape is grown. That is a plant of the turnip order which grows foliage only. It is eaten down with sheep or ploughed in green as manure. Therefore that has been deducted from the cost of rent for the whole of the year. There is a note below which begins "Catch crop."

10,774. This is an early crop of potatoes. The potatoes would not stand on the land three-fourths of the year?—The farmer is allocating the portion of the rent which he thinks is due to this catch crop; that is all.

10,775. If he did not grow them as a catch crop he would grow something else, because an early crop of potatoes do not stand on the ground very long?—Yes; but they find in Ayrshire that that is the most profitable thing to do for the potatoes themselves, and that is how they do it.

10,776. Would not three months cover early potatoes?—Yes, but the ground is left vacant all the rest of the time.

10,777. I see there is 30 cwts. of seed potatoes. Would you suggest that 30 cwts. an acre were planted?—I am not in that district at all; but I am quite confident that what this farmer has put down is absolutely true.

10,778. In regard to the discussions you have had in your Chamber, have they passed any resolutions as to this question of the future of the agricultural industry?—I do not remember at the moment if any resolutions were passed; but at the Directors' meetings we have time and again spoken of these guarantees during the later months, and the general feeling was that they are necessary at this stage.

10,779. But the Chamber itself has not discussed them, I gather?—The Chamber has discussed them through the Directors who have to manage the business of the Chamber.

10,780. But on the part of the members generally, there has not been sufficient interest to warrant them raising the question?—That has not cropped up.

10,781. If they had, there would have been some discussion and possibly some resolutions. That is generally the procedure, is it not? Yes, that is so.

10,782. And there has not been a resolution passed?—The principle of the Corn Production Act was approved by the general meeting.

10,783. And the figures that are contained therein?—No. We debated the figures, I remember.

10,784. Could you tell us whether there is generally on the part of farmers a concern as to the future as far as prices are concerned?—Without doubt there is.

10,785. Has there been any land sold in your district?—Some few farms have been sold recently.

10,786. Have any of them been bought by the farmers?—Most of them have been bought by the farmers.

10,787. Do you not think that that is rather contrary to the idea that they lack confidence in the future when the are prepared to purchase their own farms?—The trouble is that in most cases they have either to purchase their place or leave it. In nearly every case in our own district, I remember they were held by men who had been there for a very long period of years, and they preferred to take the risk and remain where they were.

10,788. It would not have been an unfavourable time to get out of it?—I quite agree; but a man does not readily quit his farm which he has held for 20, or 30, or 40 years, and they bought them.

10,789. Would you agree that farmers have been making very good profits the last four years?—I would certainly agree that farmers have done quite well and made a profit; but I am afraid many have not done so extraordinarily well as the general public imagine. In many cases, some of which I know personally, farmers had come through a very severe time and were really in a state of considerable indebtedness when the war broke out. These men have cleared their feet, and are in a better position than they were ever in before.

10,790. Would it be true to say that, apart from paying off any existing debt, a good number of them have made very substantial profits?—Some of them have made quite substantial profits.

10,791. And that the valuations of their stock would be at a very high figure?—If they went out just now, they would get much more.

10,792. Therefore if they did go out, they would go under very good conditions?—Yes.

10,793. But in place of that they prefer to buy their farms?—Yes, because in many cases they were men still active and vigorous, and naturally they were not going to turn to another line of life at their time; they could not do it.

10,794. Does it not occur to you that if they had been doing so poorly in the past, that by investing the money they realised on their farm they would get a better income than we are told they get by working the farm?—I do not think a life of idleness appeals to many people; certainly not in Scotland.

10,795. But if they had been doing so badly as to accumulate substantial debts, would not it have been an inducement for them to sell and invest that money and secure a regular income?—Of course there is an inducement to go out and sell just now; but, on the other hand, they did not wish to give up the livelihood they have been accustomed to. A second thing is this: that we have the assurance that agriculture is now coming into its own and is not going to be neglected as it was in the past. The people have awakened to the need of agriculture, and therefore there was not the same inducement for farmers to sell as there might have been some years ago.

10,796. There is an inducement to-day; and in spite of that, and with all their anxiety in regard to the future, they are prepared to purchase their farms?—Yes, they have purchased their farms. I think perhaps a great many outsiders do not just realise what the connection between a farmer and his farm really is. I think that is where many people go astray. A farmer is bound up in his farm. He has lived in it, it may be, 40 years, and knows every field of it, and he is not going to give up his life work if he can help it.

10,797. But there has got to be more than sentiment to enable a farmer to live?—Yes; but, as I say, he has the knowledge that the people have awakened to the need of agriculture, and we have been assured that agriculture is not going to be neglected, and that is worth something.

10,798. That would rather suggest he has confidence in the future rather than a lack of confidence?—Well; it is a hope.

10,799. In regard to these tables, which I understand are your evidence, Mr. Armour, would you agree that during the past few years farmers have done exceedingly well?—(*Mr. Armour*): Yes, I would say that farmers have done well; but I do not think, as a general rule, I would say exceeding well.

10,800. Regarding yourself, would you admit that you have done very well this last two years?—These last two years I have done fairly well.

* *See* Appendix No. III.

10,801. Only fairly well?—Yes, only fairly well.

10,802. These figures rather suggest the opposite, do they not?—I do not know that they do.

10,803. As far as I can work them out, it seems to me that on 66 acres of wheat you made a profit of £346 10s. That is not bad, is it?—I do not think there is that profit in it. (*Mr. Mercer*): What about the loss on the turnip crop in the Lothians this last year? They had a miserable turnip crop last year.

10,804. You know more about that than I; but in my business in Scotland, I marvel at the wonderful turnip crops I see everywhere?—This year it was so, perhaps.

10,805. This year and the year before?—I can give you a figure which will interest you. I have usually stored 1,200 loads of turnips, but I do not think I drove into my steadings last year 150 loads. That was something like the proportion of the turnip crop last year, and it was costing far more to raise.

10,806. I have no information as to details in that respect; but all I can say is that I have never seen such crops in England?—These are things that perhaps people want to know.

10,807. This year you could see very blank spaces in some fields in England; but I failed to see any blank spaces when I was going up the East Coast to Edinburgh?—(*Mr. Armour*): Have you gone up above Edinburgh towards Aberdeen?

10,808. Last year I saw some fields, and they looked exceedingly well?—Last year we had a good crop and it yielded well; but this year it will not.

10,809. Do you suggest then that there is a loss on turnips?—(*Mr. Mercer*): A very distinct loss. (*Mr. Armour*): There is a decided loss on turnips.

10,810. What about hay?—Last year there was a profit.

10,811. Would it be fair to assume that with the interest on your capital which you reckon at 10s. an acre, you make £1,000 on your farm?—No.

10,812. That would not be a fair assumption?—No, I could not make £1,000.

10,813. You spoke of the fact that the land has deteriorated, and that it will cost a great deal to get it back into the proper condition?—Yes, that is so.

10,814. Do you think that that cost ought to be charged up to the future years' working entirely?—It is expenses that ought to have been expended on the past crops; but it is the future crops that will have to pay for it.

10,815. But, surely, in the ordinary way of business there would have been a reserve fund established, seeing that you were not expending all that you were entitled to do and might have to expend more later. Would it be fair therefore to say that out of what would be a normal profit as compared with normal times, some of that money should be earmarked for cleaning the land because it has not been spent in these years?—We are very much in the same position as a man who was cashing deposit receipts and putting it to current account. That is what we were doing in the past two years, and we have that to replace now and in the future.

10,816. Not having expended it in cash, you earned a little by it, did you not?—It has cost us more, and we have deteriorated our land.

10,817. You say the land will have to go down to grass unless there is some guarantee given to the farmers?—The process has already begun.

10,818. Can you tell us what will be done with the farms when they are down to grass?—They will be worked at very little expense.

10,819. For what purpose; what kind of farm?—They will be stocked with sheep and cattle.

10,820. I understood you to say in answer to questions, that the breeding of sheep did not pay and that cattle did not pay?—Not in that way. I said it did not pay to raise these crops and consume straw in your courts and raise turnips to feed the cattle fat; but it is a very different thing if you begin to breed your cattle and gradually feed them off the grass and have no labour on your farm at all, and produce no manure except what you produce in the cattle courts. Then you can work the farm possibly at a profit to the farmer, but a very serious loss to the country.

10,821. If the farmers put all their farms down to grass, would not that create very great difficulty by producing one particular kind of thing?—No. They will only produce beef, and there is no limit to the consumption of beef in this country. We cannot supply half of it.

10,822. But is it not possible that the importation of foreign grown meat would have an effect on the situation and make it unprofitable to the grower?—Yes, I agree with you that is what will happen.

10,823. So therefore the farmer looks like going out altogether?—To a great extent profitable farming would go down

10,824. You do not think that this is a bogey that farmers have persuaded themselves into, and believe in as a reality?—If our costs of production are to be maintained at anything like the present high standard, we see nothing else in front of us but bankruptcy. We know what has happened to us in the past, and the same thing will happen to us in the future.

10,825. But have you considered this question from the point of view of market prices keeping up with the natural play of the market?—I will tell you what was in most farmers' minds this year about hay. There is not a farmer but who considered that the price of hay would be down to £4 this year; and if there had not been the drought in England, that is what the price would have been. There would have been over production in hay, and you would not have to go many years until you found over production in hay and over production in potatoes, and gradually you would find over production of cereals, too. That is what most of the farmers are thinking.

10,826. Over production in cereals, do you suggest?—I think so. In a few years you will find there will be not over production in this sense, but there will be a surplus of cereals put into the country that will put the growing of cereals out of this country.

10,827. Is it not a fact that in very many cases in Scotland the farmers are prepared to take their chance in the future with some amount of confidence apart from any guarantee?—Yes, you find farmers with a great deal of hope. They are hoping always for the best; but you must recollect that a great many farms have changed hands in Scotland through sheer inability to make them pay.

10,828. Do you suggest that farmers have gone out this year?—No, not this year; but prior to the war and before the South African war farmers were making losses; there was no profit in it. The labourer was paid nothing. Women were only paid 8s. or 9s. a week. That state of matters cannot continue in this country now.

10,829. What do you base your fear upon in regard to the falling of prices?—The consumption of oats and the consumption of hay will be very materially reduced owing to the alteration in various forms of transport. Transport will not be done to the same extent with horses as it was before the war. That would be one element that would tell. Another element is the quantities of food brought over from America to Europe. When all that is brought to bear on the civil population, the prices are bound to come down, and when prices come down out goes the arable cultivation.

10,830. Are not farmers always arguing that the horse transport will go out since motor transport came in; and is not it the fact that the price of horses has increased, which rather shows the contrary?—Yes; if you have so many horses and take them out and shoot them, you are bound to increase the price of horses.

10,831. I am talking of before the war?—No, there was not a great deal of increase in the price of horses before the war.

10,832. But there was no decrease. If there was any alteration, I suggest there was an increase?—No, I would not say there was any great increase. Second rate horses were cheap; but if you wanted a good horse it was £50 or £60. In 1872 they were much higher than they were before this war.

10,833. Do you know any farmers who actually keep accounts and work out a balance sheet of their farms?—I do not know many.

10,834. Do you know any?—I have never seen any farmers' balance sheets.

10,835. Do you think it is possible for this Commission to get information in that respect?—I think you could get a lot of information.

10,836. I do not mean estimated figures?—No, accurate figures. If you get a farmer to supply you with the wages he pays, the number of people he has on the farm, the quantity of cereals he disposes of, and the prices he gets for them and how much he spent on manures you will go a long way to get the information you want; but if you want detailed information and balance sheets from farmers, you will never get it.

10,837. But if we could get some information showing the total expenditure and the total income in connection with the farm?—There is nothing to hinder you getting that.

10,838. Do you keep balance sheets or accounts in that way?—I keep my accounts so that I could give you these figures.

10,839. Would you be willing to let the Commission have them?—I would not be willing to let you have my books; but if you were to ask for information like that, I do not see any objection to a farmer giving it to you. I would not like to be the only farmer that would give you that. I think if you want that information, all farmers should be put on the same footing.

10,840. Can you tell me why the farmers hesitate to give this Commission exact information of that description?—I believe a good many farmers have the information; but I believe there are a great many who have not the information, and farmers should all be treated alike. If you want that information, you must ask for it from all farmers and not from one or two.

10,841. But it is impossible for us to ask for it from all farmers. If we could get a few cases which would illustrate the general position, that would be exceedingly helpful. I would like to suggest to you that if the farmers are going to ask the general public to give them consideration in the way of guaranteed prices, the general public and Parliament itself may expect some definite information which will justify that policy; and unless the farmers are prepared to give it, how is it possible even for this Commission or Parliament, or any other body, to form a correct opinion of what is needed? I know You have great difficulty; but if you ask from every farmer simply information such as the expenditure and the income which I have no doubt you could get, then you could grade up all your farms. If a farm were in the same locality, then you could go to the farmer and say: "Why is it you have not the same yield off your farm as your neighbour?" In that way you could grade it. But to get information from one individual farmer would lead you to nothing. You would only know what that individual farmer was doing. If you want information, I would put them all in the same box; every farmer would need to supply it, and it would grade up the production.

10,842. Do you know it was suggested that if this Commission were not held in public, the farmers would be willing to give us exact information, and up to the present we can get nothing except what after all are only estimated figures, and that one side of the balance sheet only?—You will have to take steps to get it, but that is the reason.

10,843. Is it possible for you through your Chamber of Agriculture, to help this Commission by the production of actual expenditure and income; that is, actual accounts of farming? It would be possible if an explanatory note be made that you desire to point out it is not a special farm or anything of that sort. There are men on the Commission I suggest who could give credit for anything that was needed in that respect? I must admit to you that the Chamber would have difficulty in getting that from certain farmers or any farmers.

10,844. Then what is the deduction one is compelled to make from a statement of that sort?—The deduction you can make from that is, that the farmers do not keep correct accounts, you might say. They know exactly who is indebted to them and to whom they are indebted; but as to keeping a correct set of books and balancing them off, they do not do it, and they never have been accustomed to do it. If you want to educate them into that, it will be a very difficult job with the present generation of farmers. You may do it with the rising generation; but I may tell you farming and book-keeping or clerking, I will say, do not go together.

10,845. Is it a fair deduction to make, that if this Commission failed to get information of the description I have been speaking of from the sources where that information is available—and I understand from your own statement some such information is available—the farmers are afraid to let the facts be known, because it will dispose of their claim for State aid in the farming industry? Is that a natural deduction?—No, I will not put it that way. I would put it that farmers really have a disinclination to give it, and they have not the exact figures to give it. I do not think it is because they have anything to hide at all.

10,846. *Mr. Robbins*: I understood you to say, Mr. Mercer, in reply to a question put to you by Mr. Walker, that early in 1917 the farmers of Scotland were desirous of being left alone?—(*Mr. Mercer*): Yes, prior to that.

10,847. But at the moment they do desire some guarantee from the State. Is that because they assume that the Government will bring pressure to bear upon them to maintain the existing area of arable land?—The feeling is that if the arable land is to be maintained, at least there should be some guarantee.

10,848. Exactly; and they assume the Government will insist on the present area of arable land being maintained?—Yes, if they wish that, certainly.

10,849. And therefore they desire the guarantee?—Yes.

10,850. But if, on the other hand, they were convinced that the Government were indifferent as to the area under the plough, they would be just as willing to-day to be left alone as in 1917, would they not?—If the Government would intimate that fact, then the farmers would proceed to do the best they can.

10,851. I understand farmers in Scotland are not in the position of suppliants for favour from the community. They say if the community desires to interfere in the conduct of their business, they must be indemnified against loss?—Yes.

10,852. If, on the other hand, the community is willing to leave them alone, they do not ask any favour from the community?—That is exactly what we have stated in our final clauses.

10,853. I want to be quite clear about that. Do you really think that the suggestion you make as to the setting up of a Committee which would fix prices every September, would really give that confidence to the farmer which he desires in order to encourage him to maintain his present area of land under the plough? If he is uncertain every year as to what is going to happen a year afterwards, surely that would not give him much confidence?—Still, if a farmer knows in the autumn what his prospects are as to price for the next season, he can within certain limits alter his crop.

10,854. You think the Scotch farmer will be satisfied with that from year to year?—It would certainly give them a certain amount of confidence.

10,855. It would be better than nothing?—Yes, it would be better than nothing.

10,856. Then, Mr. Armour, I understood Mr. Smith objects to the cost of cleaning land which has got dirty during the war years being charged up to future crops. What I want to put to you is, that it must either be charged to future crops or you must write off the cost from your profits?—(*Mr. Armour*): Yes.

10,857. Either the profits which are said to have been made during the war are really fictitious, or else you have to charge up the cost of putting the land back into the same position as it was in before the war to future crops?—Yes, that is so.

10,858. *Mr. Parker*: In reply to Mr. Cautley you said that the average yield for wheat, barley and oats on your farm was rather above the average of the yields in Scotland?—Yes.

10,859. Are the figures suggested on Table No. 1 of your précis for the minimum prices based on the experience of your own farm or on the average yield in Scotland?—The experience of my own farm.

10,860. Then the average yield in Scotland being less than your own farm, these minimum prices require to be revised? Yes.

10,861. What revision would you suggest? You put wheat at 58s., based on your own experience. What should that figure be if based on the average yield in Scotland?—In that case wheat would possibly be taken at four quarters, and barley would be taken at four quarters.

10,862. What would that raise the figure to?—I do not know, but it can be worked out. Then oats would be five quarters.

10,863. In each of the figures you have given for wheat, barley and oats, you are one quarter above the average?—Yes; that is about it.

10,864. So these figures want reducing by one quarter?—They would.

10,865. Mr. Nicholls: I wanted to ask you, Mr. Mercer, whether the directors of the Chamber are practical farmers?—(*Mr. Mercer*): I think nearly every director is a practical farmer.

10,866. And engaged in the business?—Engaged in the practice of agriculture. There are one or two perhaps not, but the great majority are.

10,867. With regard to the potato lists, when we get the further information, if you do not mind, I would like to know the reason for the contrasts between Ayrshire and Forfarshire with regard to the amount of seed put in per acre. In Ayrshire it is 30 cwt. to the acre, and in Forfarshire it is 22 cwt.; and in some of the evidence we have had before us, it is down as low as 16 cwt., and in one case 15 cwt. Will you try and find out why in Scotland the quantity should be high in comparison per acre?—What may easily account for that difference is the size of seed planted. That at once makes a difference in the tonnage per acre. Then in Ayrshire these are early potatoes, and they plant them very closely. I have no doubt that that is the reason for the 30 cwt. Their drills are closer together, and they plant a little closer between the plants. That will account for the difference.

10,868. Then do you think in Forfarshire they really do go in for big seed?—That may account for it. I could not tell you definitely at the moment.

10,869. There is a lot of difference between 22 cwt. and 15 cwt. in some of our cases. Then with regard to farmyard manure, the Ayrshire manure is 14s. a ton, and the Forfarshire manure is only 10s. Is the muck really a better quality in Ayrshire than in Forfarshire? You might find that out? I think part of the reason there again is, that in Ayrshire they buy a lot of that manure, and know exactly what it costs. In Forfarshire this would be dung made in the cattle courts and taken out, and the farmer has just allowed 10s. a ton.

10,870. I am a little bit puzzled, Mr. Armour, about the reference in the last paragraph but one of the précis. I am not quite clear what is meant by "excessive and cross-cropping"?—(*Mr. Armour*): Excessive and cross-cropping is this; that you will find there is a great number of farms in which a barley crop has been taken after oats, and in also many cases a wheat crop. Whichever crop a farmer thought he was going to make most out of, he would cross-crop with that crop, and he would avoid the potatoes because he was scarce of labour and it was a more expensive crop to produce.

10,871. It is really successive wheat crops?—Successive wheat crops. (*Mr. Mercer*): Most of which were grown under pressure from the Agricultural Committees. (*Mr. Armour*): If you adopt that system, you have to pay the penalty for it.

10,872. You mean it not only draws the land extra?—But it decreases the productivity.

10,873. It does not have the same labour on it?—It is not that; but if you have a green crop you can clean it.

10,874. Under the Education item paragraph (8), I am not quite clear whether in answering Mr. Walker you made it clear that you were referring to the rates for education and not the education itself?—That is so.

10,875. But in an answer earlier on, you did make a reference to the extra time taken by lads, I understood you to say two hours a night, when sometimes they have to go for training, and in some cases four hours in the daytime during the week, which will act as a handicap against agriculture?—There is no doubt of it; because these boys, so far as Scotland is concerned, must be exempted from their work to attend. If you work nine hours on a farm and a boy has to go to school, then you can only get seven hours out of the boy.

10,876. That is bringing it back to the education item and not to the rate?—Yes, but the rates are going to affect agriculture materially, because there is going to be an increase, and a big increase, in Scotland.

10,877. I admit the rate trouble is a burden on agriculture; but I am anxious with you that these boys should be better educated?—Yes, I agree.

10,878. And I thought your answer to Mr. Walker was that you favoured the education of the boy, and that the better the education the better for the boy?—Yes, that is so.

10,879. He must have time for it?—Yes, he must; and therefore it is going to interfere with the farmers' operations.

10,880. And you do not think that the education afterwards will compensate agriculture as a whole?—No, it will not compensate it. It may compensate the boy, and I hope it does.

10,881. I mean will it compensate agriculture to get a class of better educated lad interested in the industry. That is what I am after?—Yes, I quite agree it would, if you could get them to stay on the land.

10,882. Of couse, we have to run the risk of that. The tendency all the time is for a better chance for every lad?—Yes; I quite agree with those sentiments.

10,883. Then I am not quite sure what the position was about guaranteeing the acreage. There have been several questions asked which have brought out part of it, and I am to some extent satisfied; but I want really to know whether you consider that if the Government comes along and says to the farmer: "We will give you a guarantee on cereal growing," and the Government say: "Now we want you to guarantee us a certain acreage, and shall insist on it: and we shall also insist that a certain quantity of labour is spent on that cereal growing so that it does not go to rubbish," he is prepared to accept that situation?—Yes.

10,884. You think he is?—Yes, he ought to be.

10,885. Then, further, on the question of wages and the increase independent of the Corn Production Act, I want to know whether you really think that the wages in Scotland would have increased as they have done if there had been no Corn Production Act at all?—Certainly the wages would have increased.

10,886. You think that the Corn Production Act made no difference whatever to the wages?—None whatever.

10,887. And that really what you or the Chamber is after is asking the Government now these wages are higher and are likely to keep up to give them some guarantee that they have the money to pay the extra? Is that what they are really after?—That is so. Farmers want to be able to pay the highest wages in order to get the best men. We do not want to be left with all the worst men; and unless we pay a good wage we will not get the men, so that we are all in favour of the worker being protected as well as the farmer.

10,888. I have not yet heard how much permanent grass land you have on your farm?—I think you will see it at the bottom of my statement. I had 48 acres in 1913 out of 400; then in 1918 I had 25 acres.

10,889. Is that old grass?—Part of it is. It is part grass I keep to graze my horses.

10,890. But is it old grass land which was laid down when you went there, or have you made it?—I have made part of it.

10,891. Part of it is old?—Part of it is old, but a very small part of it.

10,892. Is it a good grass?—Yes, it is all right.

10,893. And you really think that it would be a paying proposition to farmers if they cannot get what they are thinking about here to go in for grass permanently?—It is the only alternative that is left for them.

10,894. *Mr. Lennard*: Am I right in understanding that these estimates you have given us of the cost of growing wheat, barley and oats are based on an average quality of land?—Yes, average quality.

10,895. Have the directors of your Chamber considered and approved these estimates?—Yes, they have considered them.

10,896. On land poorer than this average quality you would, I suppose expect the rent to be lower?—Quite; and of course on land poorer in quality the tendency is to allow it to lie in pasture for so long and then it fertilises itself. Then possibly you get the grain crop with very little expense. Then you put it into grass again and allow it to recover. That is the general rule in working poor land.

10,897. Is it within your knowledge that agricultural wages are considerably higher in Scotland than they are in England?—I could not exactly say. I think they have risen, as far as I can see, in proportion more in England than they have in Scotland, but our wages were higher to begin with.

10,898. And they are still a good deal higher?—Yes.

10,899. In districts where wages are lower than they are in Scotland should the figures you have given us be more than sufficient to cover the cost of producing cereals?—I think so.

10,900. If you found that in spite of wages being lower than they are in Scotland, the costs of production in certain districts were higher than your own, would that suggest to you that the quality of the farming in those districts is inferior to the quality of the farming in Scotland?—You might find that the quality of labour was inferior.

10,901. By an even greater amount than the wages were lower?—I think possibly the quality of the labour has a great deal to do with bad farming, just as much as the farmer has.

10,902. You suggest that though your wages are higher in Scotland your cost of labour may be less?—Yes, I agree that is so.

10,903. I notice that the figure you give for wheat is somewhat lower than the guarantee fixed by the Corn Production Act for 1917?—Yes.

10,904. Being 58s. for a quarter of 504 lbs., as compared with 60s. per quarter of 480 lbs.; while the figure you give for oats is somewhat higher than the 1917 guarantee, being 48s. 9d. per quarter of 336 lbs. instead of 38s. 6d. per quarter of 312 lbs. It works out roughly at 1·74d. per lb., as compared with 1·48d. per lb. Would you mind explaining your reasons for that?—You see I have treated all the cereals alike; but there is no doubt that they ought to be debited to the wheat crop as regards a great deal of the expense in cleaning the land and the extra manurial advantage it gets from being left on the land. But I have not dealt with that extra cleaning that ought to be debited to the wheat.

10,905. So you do not think that the proportions between these prices you have given us could be taken as a proper figure of the proportions between the guaranteed prices of these various cereals?—I have left that to the Commission itself, with the explanation that I think the wheat ought to be debited with more than the other crops for the cleaning.

10,906. Yes; but it does not guide us very much unless we know by how much you think?—I think I would put it at £3 an acre nearly; that is a quarter of wheat, 60s. That would add 12s. to it

10,907. You think that the proportion would be right if we raised this 58s. to 60s.?—No, to 70s. If you were to add £3, that is practically a quarter of wheat at 60s., which would be 12s. the quarter that you would have to add. If you had not these conditions of being on your best land and following a potato crop, you would not get five quarters, and you would have to be content with four. Then you could divide my result by four.

10,908. These costs which we are now transferring to the wheat crop are charged in your figures against the barley and the oats?—And the wheat too. They are spread over; but I am giving you that explanation.

10,909. But you consider an amount equivalent to 12s. a quarter on the wheat——?—About that; or take it at four quarters instead of five, if you did not follow the potato crop.

10,910. An amount equivalent to 12s. a quarter which should go to the wheat is spread over the barley and the oats in your figures?—Yes.

10,911. How much of that 12s. should we have off for the barley and oats respectively? I am trying to get to something which would guide us as to the proper proportion between the guaranteed prices for the different cereals?—I would not be inclined to put very much against the oats at all; possibly £1 per acre. I do not know how you would put it per quarter. The oats certainly benefit by the cleaning operation, but not to the same extent as the wheat.

10,912. So that you would raise the oats also?—I would raise the oats, but not in the same proportion as wheat.

10,913. I think we are rather at cross purposes. I understood that these figures you had given us were your own of the cost of producing respectively a quarter of wheat, barley and oats?—Exactly.

10,914. Then I raised the question of the proportions between these prices being very different from the proportion between the guaranteed prices of the Corn Production Act?—Yes; but my explanation to you is this: that if you are not going to follow that wheat after potatoes, then instead of averaging your yield at five quarters you have to average it at four quarters, and therefore you must debit so much of the cleaning towards the wheat.

10,915. But are not you now suggesting that these figures should all be, or at any rate the wheat and oats, higher than they really are?—No; these are the exact figures from my wages paid and the expenses divided through the whole cereal crop; but I want to explain to you that the wheat ought to be debited with a certain proportion of the expenses because it follows the potatoes; and I suggest that instead of a yield of five quarters, if you did not follow potatoes, you would only have a yield of four quarters.

10,916. Yes; but that total amount which ought to be debited has been allowed for by you and spread over the three cereals, has not it?—No, I have not allowed for it all.

10,917. So that you now want to revise your figure by bringing up your wheat price to 70s.?—Yes, that would be a way.

10,918. What happens to your barley and your oats?—The oats come in last. They do not get the same benefit as the wheat. Wheat comes first, being the first crop after a green crop, and naturally gets the full benefit.

10,919. So that alters the proportions?—Yes.

10,920. By how much would you put it?—I would put it at about £3 for wheat.

10,921. So that your revised figure for wheat would be 70s.?—Yes, that would be about it.

10,922. What about the oats?—I would not put it so high for the oats. I would say possibly oats benefited by £1 per acre.

10,923. How much would that be a quarter?—That would be 3s. a quarter.

10,924. So that your oats would come up to 51s. 9d.?—Yes; but of course that would go to the credit of the cost of producing the potato crop. These figures go to the debit of the cereal crop for cleaning, and then they must go to the credit of the potato crop.

10,925. Yes, I quite understand; but I am not yet quite clear whether you consider that if guaranteed prices were fixed for each of the cereal crops, the proportion between those guaranteed prices should follow these three figures you have given us here: 58s. for wheat; 60s. 3d. for barley; and 48s. 7d. for oats; or whether they should follow the new figures you are now giving us?—I think that would be a thing for consideration.

10,926. It is a very vital point, is it not?—I know. You would recover these expenses on the potato crop. If you apply them to the grain crop, then you would get them in the potato crop, because you are crediting your potato crop. You are only shifting the thing from one crop to another, but the expense remains the same on the whole of the crops. On that system of farming they are not dependent on one another.

10,927. But the potato crop pays its own way?—I would not like to say it pays its own way; it is a very expensive crop, and most farmers shirk it. If it were not that they are being compensated through the other crops, many farmers would not have it.

10,928. Cannot you give us an opinion as to whether the guaranteed prices fixed, if any prices are to be fixed, should follow the proportion between the figures in your evidence-in chief here or in regard to wheat and oats, such a proportion as 70s. to 51s. 9d.?—My answer to that is this, that we cannot grow wheat under the best conditions unless we follow a potato crop. In that case you would debit the wheat crop with £3, which equalises them and balances the two; so that if the farmer does not get it in his grain crop, he gets it in his potato crop.

10,929. Does not that mean really that the proportions you want are the proportions you have given originally?—You can put them that way if you like; but if he puts it to his grain crop, then he gets it in his green crop, so that we stand equal.

10,930. But you realise that the ratio between your price for oats and your price for wheat is considerably higher than the ratio of the guarantees of the Corn Production Act for 1917?—I do not think it would be advisable to raise the price of wheat to such an extent that a farmer could cross-crop his farm for the purpose of getting at this price of wheat. If you keep the prices very much as I have put them, then he will get his expenses recovered from the potato crop; but if you raise the price to an abnormal amount in wheat, then of course you will get cross-cropping.

10,931. Do you think that the ratio between the two prices given by the Corn Production Act gives a preference for wheat?—I think the preference for wheat is at the expense of oats.

10,932. Under the Corn Production Act?—Yes.

10,933. You know that that was not the intention of the Government; because I remember hearing Mr. Prothero (as he then was), when introducing the measure in the House, saying that he thought they were giving a slight preference to oats, because they wanted oats to be grown to a large extent?—It does not work out that way. We think there is not enough preference to oats and too much preference to wheat.

10,934. I understand, Mr. Mercer, that your Chamber considers a guarantee fixed for 4 or 5 years would be more satisfactory for farmers and give them a greater sense of security than one fixed from year to year?—(*Mr. Mercer*): That is so. That is to say, they wish to know that there is to be a guarantee for 4 or 5 years ahead. Then we suggest that the guarantee itself be fixed annually.

10,935. But do you not think it would be still better for them if they knew beforehand what the actual price was for 4 or 5 years?—It will be difficult to say at this moment what it ought to be 5 years hence.

10,936. A guarantee fixed ahead is better than a mere promise that there shall be a guarantee, because the guarantee may be fixed very low?—Yes, that is so; but, on the other hand, we have this Costings Committee now which is looking into all these points, and we trust after this the officials will be in a better position to know what is required to be fair. We certainly want the assurance for 5 years.

10,937. You want the assurance that there will be some guarantee for 5 years?—Yes.

10,938. But you would really prefer to have the actual figure to be determined from year to year?—It might be fairer to all concerned.

10,939. You do not think that if farmers only had a figure for one year now, and an assurance that some guarantee would be named for the next four years, they would think that means very little to them, because the guarantee that is not yet named may turn out to be something that is not worth having?—The feeling is that a guarantee for each year is always a help. It is an inducement to go on for that year, and an assurance to follow that this matter will be taken up again

10,940. But my point is, would not it be more of an assurance to them if they knew the actual figure fixed for some years ahead?—I am afraid there might be very strong objections raised to that from other quarters altogether. After all, the farmer is only wanting the assurance of those in authority that his position will be kept reasonably secure.

10,941. It is rather for the Government to consider what objection might be made in other quarters, is it not? What would give the farmer a greater sense of security and do most to encourage farming? Would he be more encouraged if he had the actual figure named for a number of years?—I quite agree that he might be.

10,942. And would that preference for a guarantee named for a certain number of years be so much, that he would prefer a somewhat lower guarantee fixed for 4 years simply to a higher guarantee for one year? You realise that in the interests of the taxpayer and in order to save the State from undertaking grave financial burdens, a guarantee fixed for a number of years will have to be somewhat lower than one year's guarantee might be?—Yes, I quite agree with that.

10,943. I mean if we had to look far ahead and give a guarantee for a number of years, we could not risk so high a figure as we might do if the guarantee were for one year only?—And yet you might find as the years went on, that the higher guarantee was really necessary to keep the land under cereal cultivation. That is the point. The conditions may change. We cannot tell. It is a safeguard that is wanted; a safeguard that will produce food. It is for the national safety.

10,944. I imagine that it is always possible to raise a guarantee. At the present moment you have your guarantee under the Corn Production Act at 55s., but the Government has guaranteed 71s. 11d.?—Then your suggestion would be that they would state a minimum for so many years, with the option of raising that, if necessary, to meet the existing conditions as years went on.

10,945. Without undertaking any obligation to raise it. Do you think that at the present moment farmers will be more encouraged by a promise, say, that this year's guarantee should be continued for next year, or by a promise, say, that a guarantee of 60s. a quarter for wheat should hold good for the next 4 years?—You see, we have no knowledge whether that guarantee might be sufficient. It might be too great again; you cannot tell. All that the farmer wishes is security.

10,946. What do you mean when you say that it might not be sufficient?—We have no idea what the world's prices may be 4 or 5 years hence, and therefore what our prices here might be.

10,947. Therefore, does not that put a greater preference on a guarantee which continued for some years; you would feel sure that then it was not falling below the year's minimum figure?—It might be, on the other hand, that in a year or two prices could be lowered very considerably. We do not know what may intervene in these years to affect the market prices, and we might be able to produce cheaper, in which case we would be quite willing to do so and take less.

10,948. Yes; but which at the moment would give the farmer a sense of security, and induce him more to put his back into the industry and to maintain his land in cultivation under the plough: a promise for 4 years at a lower figure or a promise for 1 year with a higher guarantee?—With a guarantee that it would be revised? You see, that is the alternative. Do you mean a promise really for 5 years, but the figure to be revised each year

10,949. Put it simply that you had nothing but a promise for one year, and, on the other hand, the promise of a lower figure for 4 years: would you have that?—I have no doubt, if you put it that way, the promise of a lower figure for 4 years would be better than a mere promise for one year, provided it was a

reasonable figure. Of course, if it were not a reasonable figure, then the land would go out of cereal cultivation.

10,950. Shall I be right in assuming from your figures that you would consider 60s. per quarter for wheat a reasonable figure as an assurance against loss?—For a period of years?

10,951. Yes?—At the present moment it looks a very good figure.

10,952. We are rather considering a guaranteed price, not as assuring the farmer a profit, but as an assurance against loss in any particular year. Do you share my fear that if a guaranteed price were fixed which was something more than an insurance against risk, and did assure the farmer a considerable profit, there would be some danger of less efficient farmers losing the stimulus to improve their methods? They might feel, might they not, they were safe to make a living even if they continued to employ out-of-date methods?—I think to-day we have all along maintained that if there is a guarantee, the Government have a perfect right to expect good farming, and that would need to be insisted on. We do not want to see bad farming, whatever happens.

10,953. Do you think that your local authority's inspectors are able in practice to enforce good cultivation?—They have done a great deal during these past four years in that very direction, and have done it very successfully. It was marvellous how few had to be pulled up. There were certainly cases.

10,954. Do you think that the same efficiency in action would be maintained in times of peace, or do you think it was induced to some extent by the sense of danger?—I think it would be maintained by the great majority. In times of peace there was a very wholesome desire on the part of the bulk of the farmers to produce the best they could, but there would have to be some authority who would have power to see that the effort put forward was reasonable.

10,955. Then just one point developing some questions that Mr. Smith asked you. In answer to Mr. Smith you said, I think, that farmers bought their farms because they did not like the idea of being turned out; and you suggested that it was rather their affection for their farms very often than their confidence in the future prosperity of the industry which leads them to buy their farms. Is that so?—I certainly say they did not wish to leave their farms. In many cases they would not have had any other thing to turn to, and farms are not very easily procured, and therefore they bought the farm they were on.

10,956. Your suggestion was that it was not so much evidence of their belief in the future prosperity of the industry as a sign of their affection for the farm?—I have met no farmer who wished to buy his farm; and of those who bought them, I have not met one who would wish to do it, or who would voluntarily buy it. They were bought under the compulsion of sale; the farm was to be sold.

10,957. Do you happen to know whether the prices paid for the purchase of these farms were high? Did the interest on the purchase-money amount to a high increase of rent?—In most cases they were bought at a figure quite relative to the rent paid; in some cases they were a little higher. Under special conditions the competition was keener. In most of the cases there was quite a relative proportion between the amount paid and the rent.

10,958. You are aware that that has not been the experience in England?—Yes; I have noticed that from the papers.

10,959. There has been a considerable increase in the rent?—I have been rather surprised by that fact.

10,960. But in any case the purchase of the farm binds the man, so to speak, to pay that rent for ever?—Yes.

10,961. And you suggest that the willingness of farmers as shown to-day in this way is due not so much to their belief in the future prosperity of the industry as to personal disinclination to move out?—Yes. I am quite sure of that; because many of them have told me that they had no desire to buy at all, but rather than quit they bought.

10,962. In any case, I suppose I am right in thinking that the Scotch farmer would not be led out of affection for his farm to pay more for it than he was obliged to do?—No; but I have known cases where men have made substantial increases just to retain their old place.

10,963. But they would buy it as cheaply as they could?—Certainly.

10,964. Then I suggest to you that the high prices paid for farms are due to the fact that if the existing tenant did not give a high price, someone else would?—That is quite possible.

10,965. And that means, does it not, that other people who have no special affection for the particular farm would be willing to pay a big price for it?—Yes. I have known cases within the later months where men who have made fortunes in other lines have bought their farms.

10,966. In other words, people who have no special affection for a particular farm think the prospect of farming is sufficiently good to justify their paying pretty high prices?—In some cases the men did not really need to care whether the prospects were good or bad. They had an ample fortune and bought a farm.

10,967. As a pleasure farm?—They would farm it doubtless well enough, but they really need not care whether it shows profit or not.

10,968. Mr. Armour, you spoke of the danger of a large amount of land being turned down to grass. Would you tell me, if that were done, how you consider the grass would be used; because I think you said beef production was unremunerative, and that the internal-combustion engine was causing the farmer to lose his market for hay?—(*Mr. Armour*): And oats. I was talking of the conditions and taking the most out of the land which is in the four-shift course. If you turn the farm into grass, then of course you can make a certain profit out of it by raising cattle and by feeding them; but you cannot work that system if you want the utmost production of the soil.

10,969. It would be by raising cattle that the farmer would be making profit if he turned it to grass?—By turning it to grass he becomes a breeder of cattle, and feeds the cattle he breeds in the stall. In the case of the farm I was talking about, he buys in store cattle and puts them in his stalls and feeds them for the butchers; and as soon as that lot is out he puts in another. That system of farming could not be carried on, and is not carried on, at a profit. It is only out of his other crops by having the manure that he gets his profit. Therefore, it is only on the best farms that that system is carried on; because if he produces dear farmyard manure he must have crops to recover his loss in cattle feeding.

10,970. But on grass land you think beef production is remunerative?—No.

10,971. *Mr. Prosser Jones*: I think you told one of the Commissioners that further education for young lads would mean adding to the cost of production?—Yes.

10,972. Would you mind telling us in what way?—It would interrupt the operations on the farms if you employ boys and let them go away to attend classes for four nights a week. It would interfere with your operations, because the boy might be at some job and you might not have another one to put in his place. It is not that we object to the boys getting education at all. We are talking of how it will affect agriculture, and we say it would affect it in that way.

10,973. I suppose there is a considerable latitude in the Act which could be taken advantage of?—I do not know whether it is in Scotland.

10,947. Is it not possible that these lads could attend these classes during the rainy season, say, in winter time, and it would not so much affect the harvest time?—But you do not always know when the rainy season is coming.

10,975. Have you an agricultural college for farmers in your district?—Not in our district, but we have one near.

10,976. Would it not be possible for these young lads to go there? You have just told us you lost

three days last week owing to rain. It is only one in five or one in six, and sometimes one in ten that you have of these young lads. Do you really suggest that it would affect your cost?—It would affect it in this way, that you would be deprived of the boy's labour when possibly you needed it.

10,977. I suppose you understand that it would affect every other industry in the same way?—Exactly so. It is an element to be taken into consideration in the cost of production.

10,978. Then do you think it is a sound proposition to single out one industry and subsidise it in this way?—I do; in the case of agriculture I think it is.

10,979. Why agriculture?—Because agriculture has various functions to perform. We know perfectly well that the boys bred in a country place are of better physique than boys bred in towns, and that the physique must be supplied from the country if the town industries are to be carried on. If that is so, then it is in the interests of the nation to see that agriculture is on such a footing that it will supply that want.

10,980. You mean by that, that all the industries in the country depend to a certain extent on the class of men that are brought up in the country? Yes, they do to a great extent.

10,981. What industries are there in the near vicinity where you farm?—Coal mining and oil shale mining.

10,982. You agree with me, do you not, that the rates of wages are considerably higher than they are on farms?—Yes, they are; and I think that is one of the faults we have. We do not think that the agricultural labourer gets enough.

10,983. Do you think there is any hope of farm labourers remaining with you whilst wages in the adjoining industries are so much better?—There are certain advantages in an agricultural life that they have not in a coal mine, and many men prefer it; but we usually find that the biggest and strongest of the men go into these works where they can make a very much bigger wage; but it is very much to the detriment of agriculture to have these men go off the farms.

10,984. Then until the conditions on the farms are improved there is no likelihood of having anything like a settled condition, so far as labour is concerned?—I agree.

10,985. If you turn to Table No. 1, you will find that the rates and rent have gone up 8s. 11d. Is that due to education or rent, or what is it?—No. I put that down as the probable extent to which I thought that rent and taxes would go up.

10,986. Then it is not actual?—It is not actual.

10,987. Supposing the price of cereals were to drop to the minimum now guaranteed, would that mean that the rate of pay to the labourer would also have to be reduced?—Yes, it certainly would mean that.

10,988. Does it follow the conditions in the agreement?—Not during the present guarantee. I thought you were referring to the Corn Production Act.

10,989. Yes. The prices prevailing to-day are considerably higher, are they not?—Yes.

10,990. Supposing those prices were to drop to the level of the guarantee under the Corn Production Act, would that mean that a farm labourer's wages would also have to be reduced?—Either that or you would have to do with fewer of them and reduce your cropping. Instead of a four-shift course, you would have to put it into a six-shift course, or possibly an eight-shift course; you would have to reduce your labour.

10,991. There is one point in connection with these figures shown in paragraph (6) that I wish to ask you about. It gives wheat at 504 pounds per quarter; barley, 448 pounds per quarter; and oats, 336 pounds per quarter. Then if you turn to a leaflet from the Board we have different weights: wheat, 480; barley, 400; and oats, 312?—Yes. Those are English weights and the others are Scotch. These are the weights we always sell our grain to.

10,992. Would there be any serious difficulty in getting these figures uniform throughout the country?—I would be very pleased to see them uniform, and I think they ought to be made uniform.

10,993. *Mr. Thomas Henderson*: Mr. Mercer, I think you said that you had between 3,000 or 4,000 individual members in your Chamber. What class of individuals are represented?—(*Mr. Mercer*): They are almost entirely farmers.

10,994. What do you mean by almost entirely?—We have a few factors and a few lairds; and I should say at least 90 per cent. would be farmers.

10,995. Have you any women?—A few.

10,996. Are they representative of the farming interest?—Yes; they are interested in agriculture. One or two of them are actually farming themselves.

10,997. Not all of them?—Not all of them.

10,998. So to a certain extent you are a non-agricultural body?—No, we are not that at all. One or two wives of our members have become members.

10,999. How many Show Societies and other farmers' organisations are associated with you?—I cannot give you that at the moment.

11,000. How is the Chamber governed? How are your directors appointed?—The directors are appointed in each district. The country is divided into so many districts, and a portion of the directors is appointed by the districts. The rest of the directors are appointed at a general meeting.

11,001–2. I suppose your statement here about the Chamber approving of the Corn Production Act policy so far as the guaranteed prices of cereals are concerned, refers to approval at a general meeting of the Chamber?—I think that was approved at the general meeting.

11,003. Might I ask you if there was any opposition to the approval of the policy?—Yes, there was quite a discussion on the matter.

11,004. There was more than one point of view expressed at the discussion?—Yes; I think there were one or two points of view expressed.

11,005. Was there a point of view of direct opposition to the guarantee policy expressed?—I do not think there was any vote on the question. It was more a discussion, and I could not say there was.

11,006. There was no amendment moved?—No; not according to my recollection.

11,007. May I ask, was there a motion moved?—I do not think so.

11,008. You said, Mr. Armour, in reply to Mr. Edwards and some other of the Commissioners, that you apprehended some trouble from the operation of the Education Act?—(*Mr Armour*): No; not any trouble.

11,009. I mean some trouble with regard to fitting in with the new requirements?—Yes.

11,010. That is not in operation yet, is it?—No.

11,011. You know, of course, that the Act specially provides that before it is put into operation in districts, the local industries will be consulted and their needs met?—Yes.

11,012. You know, also, that you have full opportunity of making the conditions suit your particular district as far as possible?—Yes; we have certain latitude.

11,013. So that seeing that you do not object to education in itself, and you want to give the boys a chance, the amount of latitude you are going to get will probably meet you to a very considerable extent?—We may be able to work it in, and I hope we shall be able to work it in; but at the same time what we maintain is that it will add to the cost of production.

11,014. The tendency, of course, will probably be in that direction, but the amount of latitude you are getting and the opportunity for local consultation should, I think, reduce that?—I know we will possibly get all that to fit in, and we will have to; but at the same time it will interrupt the work at the farm, and it will add to the cost of production.

11,015. Of course you have only two boys, so it will not very seriously affect you?—Sometimes we have more.

11,016. What is your maximum?—I have sometimes had three or four boys.

11,017. They may not be under any obligation to attend these classes?—They will be when the time comes.

11,018. You said in reply to another Commissioner that in your opinion 13 was the best age possible for

young people to go on the land? It is the age at which boys as a rule take to animals on the farm.

11,019. You are aware that the leaving age in Scotland now is 14?—Yes, but they leave much earlier. There is such a thing as exemption?

11,020. Yes, I know that to my cost; but you are aware that the whole trend is against exemption?—Yes, and I quite agree with it. When you have a boy who is capable of taking the education in he should get all the encouragement he can.

11,021. I suppose you would agree with me that it is not so much a matter of ability which stops further attendance at school as a matter of poverty?—I do not think it is any good keeping a boy at school if he is doing no good.

11,022. Unfortunately this has applied to the farm class of boy only?—Yes.

11,023. On what capital are you putting this interest which you refer to on Table No. 1?—£10 an acre.

10,024. Do you think it is quite legitimate to include interest on capital in your costs of production?—I do.

11,025. For what reason?—Because it is money employed; and if I have to borrow the money I have to pay for it.

11,026. Do you apply the same principle in other businesses? Do other business men charge up interest on their capital?—Certainly.

11,027. Do they not look to the profit to replace that?—If a man has £1,000 borrowed in his business and he comes to make out a balance sheet he has certainly to take into consideration that he has to pay £70 for this £1,000.

11,028. I agree; but I am assuming that this capital of yours is not borrowed?—It does not matter where it comes from; it is there, and if I had not it it would have to be borrowed.

11,029. Your rent is given in the first column as £1 14s. 1d., which I think includes some rates?—Yes.

11,030. Say 4s. 1d. for rates, leaving a rent of 30s.?—About that I think; or 32s.

11,031. You told one of the Commissioners you paid income tax on double your rent?—No, I did not mean that seriously.

11,032. You said it all the same.

11,033. *Chairman*: You said you paid on double your rent and the landlord paid half?—I said I paid nearly half the rent of my farm in income tax; but that of course would never apply to the rent of my farm.

11,034. I misunderstood you?—It all depends on your income and which source you get it from. The higher your income of course you pay on a different scale.

11,035–6. You were asked if you paid your income tax on your profits, and I thought you indicated that you paid it on half your rent?—Yes; so far as it is applicable to my income, that is about the way it works out.

Chairman: You were asked by Mr. Smith if you made £1,000 a year and you said no, that was too much.

11,037. *Mr. Thomas Henderson*: I thought he had definitely stated he was paying on that sum?—I pretty nearly pay on that, but not quite

11,038. *Mr. Smith*: It was in reply to Mr. Walker, who asked whether you paid on Schedule B, and you said yes?—Yes, I pay on double rent

11,039. *Mr. Thomas Henderson*: So that you pay on more than £1,000 a year?—But not on the profits of the farm.

11,040. Surely if the profits are lower than that, it is open to you to pay on them?—As I said, most of the farmers pay on the double rent.

11,041. That is more than £1,000 in this case?—I think I explained to you, most farmers keep books and know how they stand in regard to their accounts. They do not make balances.

11,042. Quite possibly not; but that hardly meets the point I put to you. You pay on double your rent?—Yes.

11,043. That is £1,200?—Yes.

11,044. And you have the option of paying at less than £1,000, your profits?—Yes.

11,045. As a fellow Scotsman, it does not seem quite in keeping, does it? It is open to you to take the option?—That is how it is done.

11,046. Turning to a point raised by Mr. Duncan dealing with the question of wages, the wages went up, roughly, over 100% between 1913 and 1918; and one would expect that the labour staff being the same, the figure in 1918 on Table No. 1 would be something like £1,748 instead of £1,431, the amount paid in money wages?—I think it has been explained that there was a saving of work in regard to the disposal of the produce; and then it was also explained that there was an insufficiency of labour to keep the land clean on the farm. Of course when labour is dear, there is a tendency on the part of the farmer to save as much of it as possible, and to do with as little as possible; perhaps more than he should do.

11,047. I quite agree; but I rather gathered from your answers to Mr. Duncan, that you had not been saving very much in the way of staff?—I have saved it in the way of wages.

11,048. There is the same staff, roughly speaking?—I have not the exact figures of the number of my staff, but these are the wages I pay. Casual labour comes in.

11,049. Yes, but take the figure for 1913. I do not want to labour the point very far. Had you a cattleman employed that year?—I think I had a woman with the cattle that year.

11,050. And you had no cattlemen later?—No.

11,051. So that would make the discrepancy still more marked, would it not?—It might.

11,052. You suggested, in reply to another Commissioner, that you saved a good deal of money by having your hay only delivered to Winchburgh Station, instead of to Edinburgh?—Yes.

11,053. How many hours would that employ your men in driving to Edinburgh?—Just the day's work,

11,054. The day's work would not by any means cover the discrepancy?—No, not in itself; but there is a lot of casual labour employed. You could not get labour.

11,055. Quite so; but you put it forward as a very considerable item of saving by being able to dispense with this driving to Edinburgh?—Yes; but I have done that at the expense of the future crops.

11,056. When the carts go to Edinburgh, do they come back empty?—Yes, certainly. You do not load up your horses both ways.

11,057. Still, allowing for that, it would hardly account for discrepancy?—(*Mr. Mercer*): Of course a cattlewoman's wage, in 1913, helps to explain the difference, does it not? It is making the 1913 wage higher.

11,058. Yes, I quite understand that?—(*Mr. Armour*): Then there is a bigger green crop to handle that year—more potatoes.

11,059. You deliver to Winchburgh Station now, I suppose?—Yes.

11,060. I quite agree it is a very big saving, but, to my mind, it does not clear up the mystery of the £317. With regard to the question of overtime, the 1913 figures would not, of course, include any allowance for overtime?—I always paid overtime.

11,061. Have you varied very much from your practice between 1913 and 1918?—It is certainly more now; but I have always paid the men overtime at the hay and harvest.

11,062. You have no idea of what the difference in proportion is?—No, I have no idea.

11,063. Turning to Table No. 2, you give the average price per quarter of wheat for 1913 as 32s. 8d., I think?—Yes.

11,064. You do not say what the average price for 1918 is. Could you give us that?—76s.

11,065. Then the average cost of production of wheat for 1913, according to the same table, was 27s. 10d.?—Yes.

11,066. And the average cost for 1918 was 53s. 9d.?—Yes, and 56s. and 45s.

11,067. Will you look at these figures a little more closely. I see the cost of production has apparently risen in the neighbourhood of 93 per cent., from 27s. 10d. to 53s. 9d. I would not guarantee the accuracy of the figure, but it is something in the neighbourhood?—Yes; the cost of manures will go up.

11,068. I am not criticising the figures at all, but I am taking them as they are here. During the same period, your wages rose 64 per cent., and your profit

rose from 4s. 10d. a quarter to 22s. 6d. Does not that suggest to you that you need not fear any possible rise of wages in the near future?—That is only on wheat. These are the actual expenses. Whether it works out the way you want it to work out, I do not know.

11,069. I am asking you the question. Then with regard to your average figures at the foot of Table No. 2, I think you say these averages were taken over a period of years?—Yes.

11,070. Does that include the last year of your working, 1918?—Yes.

11,071. Then might I ask whether your production for 1918 was up to the average?—In some items it was not quite up. If you take, for instance, the saddler, we have been rather keeping from sending to the saddler, and that is another item which, in future years, will have to be accounted for. Your harness gets deteriorated, and you do not replace it, because prices are so high just now.

11,072. I was talking about the figures at the foot of Table No. 2, the production of wheat per acre 5 quarters, barley 5 quarters, and oats 6 quarters. I am asking you if your production last year was up to the average?—My production of barley last year was 4·76.

11,073. And of wheat?—I could not give you last year, but I will give you the year before, because last year I had some destroyed by fire. It was 5·3.

11,074. And oats?—I cannot give you oats.

11,075. Taking it through the wheat and barley, one might say the average had been maintained last year?—Yes, I think, about.

11,076. In that case was it necessary for you to go to such an extraordinary expense, as you intimated to another Commissioner, for cleaning the land?—The land has to be cleaned. That is all about it.

11,077. Was the necessity for cleaning it so very great?—Yes.

11,078. Yet your average production was kept up last year?—Yes, on wheat.

11,079. And on oats, and almost barley?—Wheat, you know, is produced on the farm under quite different conditions. It is put on the best land, and it follows potatoes; and in that case you expect to get a good yield.

11,080. With regard to the question of policy, Mr. Mercer, you admit there are serious difficulties in the way of fixing guarantees, or even promising guarantees? You admit that the general public has to be considered?—(*Mr. Mercer*): Certainly.

11,081. You are aware that a certain section of the public at any rate will want a very strong case made out before you get guarantees?—Yes.

11,082. I suppose your Chamber have considered that possibility? Have they thought out any sort of policy at all that they could recommend their members to adopt, should the decision go against continuing guarantees to agriculture?—I am afraid the members will adopt their own policy if there is any doubt in their minds as to the future.

11,083. Has the Chamber itself done anything?—We have not recommended them to put land down to grass, because I do not think that would be in the national interest at all; and we wish to keep it under cultivation as far as possible. All along that has been the key-note of what we have done. It was really to keep up the cultivation for the national good.

11,084. Could you tell me how much land went down to grass in the Lothians during the previous period of depreciation?—(*Mr. Armour*): I could not tell you, but it was a considerable amount; and it was going down right up to when the war started and prices began to get better.

11,085. You do not know to what extent that was going on?—No, I do not. (*Mr. Mercer*): It would be difficult to say exactly, but it was to a very great extent.

11,086. That is rather vague, and it is a very important problem just now?—(*Mr. Armour*): The figures can be got from the Board of Agriculture returns.

11,087. I think if your Chamber could get them, it would be very helpful; and also the figures to show how the movement was going during the last 20 years before the war. You suggested that you saw no reason why we should not be able to feed ourselves in course of time?—To a very considerable extent.

11,088. I think you went further than that. Have you any idea how many acres of arable land are required?—I have not gone into the question.

11,089. Then on what do you base your opinion?—On an opinion.

11,090. And you cannot give us any figures?—No, I cannot.

11,091. It has been stated here by another witness that it would take some 14,000,000 acres?—I cannot go into those figures. (*Mr. Mercer*): Of course during the war we saw how the nation was becoming rapidly more self-supporting as the years went on. We have the figures for that. We have all read them and seen them.

11,092. Do you know what the maximum extent of cultivation was during the war?—I could not give you the figures.

11,093. Would you be surprised to learn it was about a third of the figure I mentioned just now. Suppose you were under no obligation as to minimum wage, but perfectly free to get your labour on what terms you could, would you still prefer the guaranteed prices of cereals, or prefer to be left alone?—I think at this stage it would be advisable to have the guarantee in the meantime at least till things get settled down; that is to say, let us get through this period with a degree of certainty. Of course we know the minimum wage has had really no bearing on the standard wage at the moment.

11,094. Do you think a feeling of security would be ensured if you got an assurance that agriculture is not to be neglected?—It would certainly be greatly strengthened.

11,095. Then your policy, in its essentials, is a war policy?—Yes, that is so.

11,096. Suppose you were assured that there was no possibility of any future war, would that make any difference?—That is an assurance I would have doubts about.

11,097. You are looking forward to the possibility of future wars?—I hope not; but you never know.

11,098. I think, Mr. Armour, you admitted a moment or two ago that agriculture ought to be subsidised because it is regarded as the breeding ground of men for other industries?—(*Mr. Armour*): It ought to be made a paying proposition. If we can make it pay without a subsidy, then certainly we do not want a subsidy; but I think it will be lamentable if agriculture is to fall into the state it was in in the seventies and the eighties, and the agricultural labourer comes down to such a small wage. I think it would be most melancholy.

11,099. You are not answering the question I put to you. You advocate subsidising agriculture on this specific ground, that you think agriculture ought to breed men for other industries?—I do not say whether agriculture should have a subsidy or not. I say it should be put on a basis on which it can be worked at a profit to the benefit of the nation. You can do it whichever way you like.

11,100. Let us waive the word subsidy. You say you want agriculture to be on such a firm basis one way or the other, involving the expenditure of State moneys, which is what it comes to, for the specific purpose of breeding men for other industries?—Yes.

11,101. What has been the tendency in your neighbourhood? Have the men remained longer in the industry, or do they go to other industries?—They go to other industries, pretty frequently.

11,102. For what reason?—Bigger wages.

11,103. And you think agriculture should be put on such a basis as to compete with these other industries?—It ought to be.

11,104. *Mr. J. M. Henderson*: I see in the third paragraph of your précis you say: "I have prepared a statement of the actual cost per acre of carrying on my farm." How much of this statement is estimate, and how much of it is actual expenditure?

Chairman: The witness has explained that.

11,105. *Mr. J. M. Henderson*: Then I will not ask that. There is one matter I should like to ask a

question or two about. I understand you said that you had the figures of the outturn to you of the revenue as against the expenditure, but that you do not like to produce it?—No, I do not agree to produce it.

11,106. That is our difficulty; that we cannot get the farmers to produce them.

Chairman: He said he would produce it if other farmers would do so.

11,107. *Mr. J. M. Henderson*: Could you state to us what was your total income without giving details?—I am not prepared to answer that question.

11,108. Then I must leave it at that. I see from figures here that you reckon that the cost for wheat would be 58s.?—Yes.

11,109. So that to make you secure, you or the Chamber of Agriculture would require a guarantee of 60s.?—Yes.

11,110. Having got that guarantee of 60s. for three or four years, let me see how you reckon it would work out. You spoke of prices coming down to the old prices. Let us say, for instance, that the world's price fell to 40s. in the fourth year. That would mean that the Government would have to pay you 20s. a quarter?—That is so.

11,111. Can you tell the Commission what is the production of wheat in this country in the number of quarters?—I am sorry I cannot give that.

11,112. Do you know how many millions it is?—I will take your figures for it. I do not know.

11,113. I have not them; but it would be just so many millions on to the compensation?—Yes, I quite agree.

11,114. And if it dropped to 30s., it would be another 10s. more?—If the present conditions, present expenses and present wages were to be maintained on a 40s. per quarter for wheat, there would be no wheat grown; so whether the country would be better to get the wheat or not, it is for them to judge.

11,115. Let us take it at that. In the meantime you say barley can be produced at 60s.?—Yes.

11,116. You know that barley is being sold at 100s. and over?—Yes.

11,117. That is £2 a quarter profit?—But I am not asking any subsidy in these prices.

11,118. No; but perhaps the public may have something to say to that. What I mean is this. Cannot part of that £2 profit a quarter be put by to meet any deficit in the future?—But how long has barley been at over 100s.?

11,119. To my knowledge it has been the last two months?—Over a month in Scotland, and I have not got any of it yet.

11,120. Two months ago that was the price being demanded in the North of Scotland?—Then I am sorry I have not got any of it.

11,121. I see it is quoted at 110s. What I want to get at is the view, if you can tell it me, of the Chamber of Agriculture of Scotland as to what the future should be. I suppose you will admit that if you once get a minimum price when prices are very high, there will be an overwhelming demand for a minimum price when prices begin to get low?—Yes, that would possibly follow.

11,122. So that what you are really asking for, or what is in your mind, is not one year or two years, but a continuous minimum to give the farmers assurance that they are not going to lose on their trade at all?—That is so.

11,123. One word about the school boys. You know that the Act gives a certain number of hours in the year?—Yes, 320.

11,124. That 320 can be more than half worked off in the winter time, can it not?—How do you know?

11,125. We all know that that used to be what Scotch people did?—That is the busiest time on the farm. All your stock has to be fed. Really the only slack time we have on the farm, if there is any slack time at all on a farm, is when there are the vacations, when teachers and boys are all out at play. But in the winter time it is about the busiest time of the year as we have all the stock in the house.

11,126. That is for cattle?—Of course the hours do not count if it is after 7 o'clock at night. It must be before 7, and you have to let them away from the farm. I am not grumbling at all, but I am only saying that will add to the cost of production.

11,127. Yes, but I am saying it will not be so hard as you are trying to make out with regard to delay of your work. You were speaking of farms being sold. Is it not a fact that for years past when a farm has been to let in Scotland of a certain size, there has been more than one or two or three or four farmers after it?—Certainly.

11,128. Does not that seem to show that there is not such a fearful risk in farming as you would make out?—It goes to show that there is a scarcity of land, and there are more farmers than there is land to go round. There are plenty of people who go and take a farm and never look to see whether it is going to pay or not. They want to get hold of the farm. But with regard to selling farms, I know that in the Lothians three of the best farms have been just now sold, and there is not one of the tenants bought them. They thought them too dear; but other people have gone and bought them.

11,129. Other farmers?—Yes, I think they are other farmers.

11,130. Did they hope to make them pay?—They had an inclination to get into a good farm, and the only way they can get into a good farm is by buying it.

11,131. I suppose you call a good farm a farm that will pay?—Yes, a farm where there is the possibility of payment.

11,132. Then you do not think the farmer goes into a venture like any other commercial man, pretty confident that he will make the thing pay? You think there is a totally different feeling amongst farmers, do you?—I think the farmer goes into his farm very much with the idea that the State cannot allow farming to go down altogether, and there must be some way out of it.

11,133. You said that the farmers would prefer to be left alone?—It was Mr. Mercer said that. That was in regard to the Corn Production Act.

Chairman: What was said was that in 1917 they would have preferred to be left alone; but as present circumstances had changed, they were desirous of having guarantees.

11,134. *Mr. J. M. Henderson*: I do not want to go over the same ground, but I want it fixed. Would you now prefer to be left alone without a guarantee?—I do not see how it is possible that the State cannot take into consideration, under the present circumstances, the position of farming.

11,135. Then your position is this: that unless the State intervenes to subsidise or protect you and assure you your guarantee, as you call it, you cannot see your way to go on?—We think that we shall meet disaster.

11,136. During the next three or four years?—Yes.

Chairman: Mr. Parker desires to put a supplementary question.

11,137. *Mr. Parker*: Mr. Lennard asked you several questions with regard to the nature of the guarantee to give the farmers necessary confidence to keep their land under the plough, and Mr. Henderson has just asked you on the same subject. Would you tell me whether you think one year's guarantee of an actual price, to vary from year to year in proportion, up or down, as the cost of farm requisites and labour vary, would give the farmers the required confidence?—I do.

11,138. And the methods to be continued would be the four-course shift?—Yes.

11,139. That is the kind of guarantee you think would give the confidence required?—Yes, I think so.

Chairman: We are very much obliged to you for sitting for such a very long examination, and for the evidence you have given.

(*The Witnesses withdrew.*)

THIRTEENTH DAY.

TUESDAY, 23RD SEPTEMBER, 1919.

PRESENT:

SIR WILLIAM BARCLAY PEAT (*Chairman*).

SIR WILLIAM JAMES ASHLEY.	MR. F. E. GREEN.
DR. C. M. DOUGLAS, C.B.	MR. J. M. HENDERSON.
MR. G. G. REA, C.B.E.	MR. T. HENDERSON.
MR. HENRY OVERMAN, O.B.E.	MR. T. PROSSER JONES.
MR. A. W. ASHBY.	MR. E. W. LANGFORD.
MR. A. BATCHELOR.	MR. R. V. LENNARD.
MR. H. S. CAUTLEY, K.C., M.P.	MR. GEORGE NICHOLLS.
MR. GEORGE DALLAS.	MR. E. H. PARKER.
MR. J. F. DUNCAN.	MR. R. R. ROBBINS.
MR. W. EDWARDS.	MR. W. R. SMITH, M.P.

MR. H. G. HOWELL, F.C.A. (Director Agricultural Costs under Agricultural Costings Committee), recalled and examined.

11,140. *Chairman*: We are very much obliged to you, Mr. Howell, for the statements of accounts you have been kind enough to send us under your covering letter of the 17th September, and also for the promise of further statements which you are good enough to make us. I believe you have some further statements with you which you desire to submit to us at once, but unfortunately the Commission cannot deal with statements they have not yet had time to examine*?—No.

11,141. I have the authority of the members for expressing the thanks of the Commission to you and your Department for the extraordinary amount of trouble you have taken in collecting and preparing the information you have now supplied us with; and we desire also to express our thanks through you to the farmers who have voluntarily sent the statements to you which you have been good enough to send on to us?—Thank you.

11,142. *Mr. Smith*: I understand that these figures are tabulated from information sent in to you by farmers?—Yes.

11,143. Could you tell us in what form they come to you. Are they in the form of definite balance sheets properly audited, or in what form?—They are in the form of definite balance sheets, as you term them, but the majority are not audited.

11,144. Do they contain the whole of the workings of the farm or do they just deal with one section of the operations, say, cereals as distinct from the fattening of livestock or anything of that sort?—No; they deal with the whole farm.

11,145. You have dissected them in these various Tables you have presented to us?—That is so.

11,146. Would they be fairly representative of the country, or do they come from any special district?—Included in the information which I have ready to submit to the Commission there is a Table showing the geographical distribution of these accounts. You will find that they come from about 40 counties in England, 8 in Wales, and 14 in Scotland.

11,147. In so far as you are able to judge would they come from what might be termed representative farmers—farmers farming on a scale that might indicate the general condition of the county as far as it is possible to do so?—I cannot say anything definite with regard to that; they were asked for at random without having regard to whether the persons were or were not representative farmers, but they do in fact cover a large number of types and different sizes of farms.

11,148. Did you get many returns from Lincolnshire?—Yes, I have had about 11 I think from Lincolnshire.

11,149. Any from the more southern part of Lincolnshire?—I do not know with regard to that.

11,150. *Mr. Parker*: You sent out some forms to be filled up?—Yes.

11,151. Were they filled up generally to your satisfaction?—With the exceptions stated in my Report, yes.

11,152. The method you adopted shows some rather strange results. Do you consider that the figures obtained are reliable?—I am not quite sure that I gather your meaning.

11,153. Take the case of the amount of capital per acre shown in the farm. The average capital is £11 17s. 9d. That seems to me very low, but it is accounted for I think by the tenant right valuation having been included by many farmers and omitted by many others?—Omitted in a very large number of cases.

11,154. The method in which these forms have been filled up would throw that capital per acre out altogether?—Yes.

11,155. If you took the tenant right valuation at Michaelmas at about £3 per acre it would add considerably to the amount of capital employed on the farm?—It would.

11,156. So that the result of filling up the forms has not led to quite a satisfactory report on the amount of capital in the farms?—That is so.

* The statements of accounts will be published as an Appendix to Volume IV. Minutes of Evidence and should be regarded as interim figures only. Certain additional information has still to be received, and the final corrected figures will be presented in a later report.

11,157. Also the method adopted shows a curious result with regard to the profits on 146,428 acres. A profit is shown by this method of £190,562, but that figure is arrived at by writing up capital values. These values have been written up £217,069, so that without the writing up of capital values by the method adopted a loss is shown?—I cannot say to what extent capital values have been written up.

11,158. Did any of the farmers attempt to show what the cash profit was?—You mean the excess receipts over the payments for the year?

11,159. Yes?—We have that in all cases. I would not call it profit. I would call it excess of receipts over payments.

11,160. *Chairman*: If I may supplement Mr. Parker's question, do the farmer's statements show what profit they have made on the farms independently of any increase in the valuation of their assets, such increase not arising from additional stock but from the re-valuation of the existing stock of the previous year? Assume that the farmer re-valued his cows, or his horses, or his implements, or any other of his assets, and put a larger price on them than existed in the previous year that would swell the nominal profits but it would not swell the cash profits, whereas if he had saleable material and took his sale profit and his debts into account you would get a real cash profit. Mr. Parker's question was: Have you in the returns from the farmers been able to differentiate between what is the real cash profit and what is the profit or loss arising from re-valuation?—No, we have not been able to do that, that is practically impossible to do, I think; it would depend upon the way the valuation was made at the beginning and end of the year. I have taken out some tables which are included in the information which is now on its way here to show you the average value per head adopted in valuing the live stock at the beginning and end of the year. May I read out a few of the figures?

11,161. I cannot stop you reading them out, but as we have not got them before us I cannot see how we can very well ask you questions with regard to them. You can hand them in for consideration?—They are on the way over now.

11,162. The Commission has passed a very strong resolution not to cross-examine witnesses upon any information that has not been before them for so many days?—As a general statement the values per head are greater at the end of the year than at the beginning. I have proved that.

11,163. *Mr. Nicholls*: Is it a fact that all of the farmers that you wrote to for their accounts have been guaranteed secrecy with regard to them?—Yes, they have.

11,164. These accounts you give are really for one year, the year 1918?—Yes, a good many of the accounts end at Michaelmas, 1918, or the following months up to March or June.

11,165. *Mr. Lennard*: I notice from the Summary of Accounts you have submitted to us that it appears the rate of profit on farms in Scotland amounts to a higher percentage on the capital employed than is obtained on farms in England and Wales?—Yes.

11,166. You have not any explanation to offer of that, have you?—No, I have no general explanation of that fact.

11,167. The difference applies, does it not, not only to tenant farmers but also to owner occupiers, and in the case of home and similar farms?—Is that stated in any particular table?

11,168. Yes, it is in paragraph 3?—It applies to tenant farmers, does it not?

11,169. Yes, and also to owner occupiers, and to the case of home and similar farms as regards the profit per cent. on capital?—Yes, the profit per cent. on capital is greater in all cases as regards Scotland.

11,170. The profit per acre is only greater in Scotland in regard to the tenant farmers?—Yes.

Chairman: These are only figures which he has collected and for which he takes no responsibility whatever. He specifically says so, because he has not audited them.

11,171. *Mr. Lennard*: Am I right in understanding from your table F that the amount of wages paid per acre averaged £2 7s. 3d. on the Scottish tenant farms as compared with £2 0s. 3d. on the farms in England and Wales?—That is so.

11,172. It does not appear from these figures that the higher profits made by the tenant farmers in Scotland are due to a lower wages bill.

Chairman: He cannot answer that question. He has only collected the figures. The Scotch figures may be wrong and the English figures may be wrong. The figures speak for themselves. He cannot say any more than "There is the figure."

11,173. *Mr. Lennard*: I was only asking him whether I was right in interpreting the figures as set out?—The number of Scottish accounts is altogether too small to draw a deduction of that kind from, I think.

11,174. *Mr. Langford*: As you are not responsible for the figures I agree it is not very useful to cross-examine you upon them. I therefore would like to know if some of these farmers who have sent in accounts to you, which you have licked into admirable shape, would be prepared to come here and support their own individual figures?—I should think that about four to six have said, in sending in their accounts, that they would be willing to appear before the Commission.

11,175. *Chairman*: Did you ask them if they were willing?—No, I did not.

11,176. From your knowledge of these gentlemen who have sent in accounts, do you consider that they would be likely to come forward and give evidence if asked to do so?—I should think, speaking quite broadly, that a small minority of them would be willing.

Mr. Langford: I think it would be very useful, Mr. Chairman, if you were to ask Mr. Howell to communicate with them and see whether we can get them here with their own accounts and their own balance sheets. That would be very much more useful than questioning Mr. Howell upon them, although I think that the information he has presented to the Commission, if I may say so, is invaluable.

Chairman: A note will be taken of that if you will make a proposition to the Commission later on.

11,177. *Mr. Prosser Jones*: In collecting these figures you have been in touch no doubt with the producer and the middleman, and possibly the retailer. I want to find out what the position of the middleman is as compared with that of the producer and the retailer in the milk trade, and how far the producer is handicapped by passing his milk through the hands of the middleman?

Chairman: I do not think Mr. Howell can tell you that. He is only an accountant, you see, although I apologise for saying so?—I am afraid I cannot answer that question.

11,178. *Mr. Prosser Jones*: Cannot you say from the accounts which have come before you whether the middleman takes a smaller profit than the producer?—It might not be apparent on the face of the accounts who was a producer and who was a middleman; the same man might be both, for example.

11,179. Does the bulk of the milk pass through the middleman or does it go direct to the retailer?—I am afraid I could not answer that.

11,180. As an accountant would you mind telling us your personal view as to the valuing of stock at market values, when the farmer does not propose to go out of business. Do you advise in that case the taking of stock at cost or at market price?—At cost price.

11,181. *Mr. Thomas Henderson*: I should like to ask you if you can give us any information with regard to the geographical distribution of these figures in Scotland?—Yes, I can give you that information and for England also if necessary.

11,182. *Mr. Edwards*: And Wales too? Yes.

11,183. *Chairman*: I think you were kind enough to say you would send in further information?—Yes. I shall be glad if the Commission will indicate anything further they would like.

11,184. *Mr. J. M. Henderson*: I have not had time to master the whole of these figures because I only had yesterday to go through them. In arriving at the results have you taken anything into account for the farmers' house accommodation?—We have speci-

fically asked all the farmers to state what the value of their own house accommodation is, the rent and the rates. We have provided a space for that to be stated, but in only a few cases has that information been given.

11,185. Also is any consideration given for the fact of their being their own suppliers of food?—There again we have asked them to furnish the information so that, given the figures we could credit the farm with an amount for that, but there again only a small number have given information.

11,186. I suppose when you are completing your statements you found from these something in the shape of a general average on which to charge?—I doubt if the numbers given would warrant that.

11,187. Still something must be credited for the farm house and the food?—It should be, certainly.

11,188. *Mr. Green*: Could you explain to us the method you pursued in obtaining these accounts from farmers?—We circulated two schedules of which I have given you two specimen copies. We sent an accompanying letter with those schedules asking them if they would send along a copy of their accounts as they made them out, together with the two schedules completed.

11,189. What I really meant was, did you take the addresses of all the farmers of England, Wales and Scotland and circularise them or how did you select them?—My instructions from the Commission were to approach those farmers with whom we were in touch as a Costing Committee, and only those, to furnish us with this information.

11,190. How did you get in touch with those?—We have been working during the last three or four months and we have got to know a considerable number of farmers, you see.

11,191. I suppose those who offered to come forward to give evidence before the Commission are what you might call the resident owners or owner occupiers?—I could not say that off-hand.

11,192. With regard to Table F. of rent, wages and profits, I have been making some rough calculations with regard to your statement, and it works out in this way, does it not: landlords get about 20 per cent. in rent, wages about 50 per cent., and the farmer about 30 per cent. of the total?—It works out roughly according to those figures.

11,193. *Mr. Edwards*: To my mind the most striking thing is the great variation of the results in the Scottish farming compared with the English farming, and the great difference in the results of the tenant farmer and those of the owner occupier. I do not know whether you can, from the accounts, give any indication as to why there is this great difference. Do the accounts from Scotland, for instance, indicate any superior ability to keep accounts as compared with the English accounts—I mean as the result of superior education?—It is rather difficult for me to answer that, but speaking quite generally, I should say that the Scottish accounts were somewhat better made out than the English, taking them all over. With regard to the disparity between the Scottish results and those of England and Wales, the chief point I gather you had in mind was the amount of capital per acre employed.

11,194. Yes, and the profit per acre and the rate of interest. Everything is so much higher?—The capital per acre is very striking as regards Scotland, but that is owing to the fact that in the acreage of those farms in Scotland there is a lot of moor land and waste land included. Since sending in the Interim Report I have had a statement made out, first including all the moorland and waste land of the Scottish farms, and next another statement excluding that moorland and waste. The results of excluding the moorland and waste come very much nearer the English figures of capital per acre than they did before.

11,195. *Chairman*: You are going to send those to us?—Yes.

11,196. *Mr. Edwards*: The capital here is greater in Scotland. It is £15 7s. 4d. an acre in Scotland, as compared with £12 3s. 10d. an acre in England and Wales?—Yes.

11,197. That does not seem to agree with what you say now?—Not as regards tenant farmers. I was speaking of the other two classes in Scotland.

11,198. That is all I want to ask you, but I really should wish myself to have some further information on this point with regard to the fact that a tenant Scottish farmer is able to make £3 2s. 7d. profit an acre, whereas the English farmer is only able to make £1 12s. 10d. profit. It seems to me to require some explanation. The same thing exactly applies to the occupying owners. The Scottish occupying owners are only able to make 15s. profit an acre, as compared with £3 2s. 7d. an acre of the Scottish tenant farmers. That seems to me to be remarkable?—There again you get this moorland figure throwing you out. The occupying owners' farms include a lot of moorland, whereas in the case of the tenant farmers there is practically no moorland at all.

11,199. *Mr. Cautley*: In the middle of paragraph 6 you say: "The number of accounts here dealt with is extremely small compared with the number of holdings in the country, and it is not possible to say, from these limited figures, whether the results shown are typical of the industry generally." That is your considered report, I understand?—Yes.

11,200. You regard, therefore, any deductions drawn from this inquiry into the 455 cases as inconclusive?—Yes.

11,201. Taking them as far as they go, would you tell me how many farmers you asked to send in accounts in order to obtain the 455 returns?—Just over 1,000.

11,202. So that you got returns from about half the number?—Yes.

11,203. Were those 1,000 the whole of the farmers with whom you have been brought into contact through the Costings Committee?—Yes.

11,204. How did you get originally into communication with those 1,000?—We have taken certain steps to make our existence known to the industry generally.

11,205. By advertisement?—By advertisement and by circularising selected lists of farmers which we obtained from various sources, and the farmers' organisations and other sources.

11,206. Were a considerable proportion of the lists supplied by the farmers' organisations?—Not a considerable proportion.

11,207. A small percentage?—No, I should say the majority would have been supplied by farmers' organisations.

11,208. I should call the majority a considerable proportion? You did get the majority of them through farmers' organisations—they gave you the names of farmers to apply to?—Yes.

11,209. And the rest of them?—We got them from all sorts of sources. I do not think I can remember quite whom we tapped for these others, but in addition to these names we have had from farmers' organisations and other sources, we have also had a number of press notices from time to time explaining our objects and so on, which were addressed to the whole industry.

11,210. Were some of them volunteered from people who read the advertisements?—I am unable to say from what sources these farmers came, whether they read the press notices or whether they had any particular circulars, but, at any rate, we have taken ample means to get the ear of the industry generally as to our existence.

11,211. Out of the 455 you reduce them to 304?—Yes.

11,212. Mr. Parker was asking you what I think is a most important point, and I am going to pursue it a little further, that is about the amount of profit shown?—Yes.

11,213. As I understand, taking page 3, Schedule A, it shows the table of information that you required which you sent out to each of the 304 farmers—you issue there the details that you want from the farmer of his income or his receipts, and also, on the other side, of his expenditure or payments?—Yes.

11,214. Did they fill that up?—In very few cases they filled up this page. In the great majority of cases they sent us, as we meant them to do, a copy

of their actual accounts, because we say on this particular page: "The above headings are for guidance only, and no values are to be inserted here."

11,214A. Have you been able to extract from their accounts the details that you asked for on this page 3?—In the great majority of cases, yes.

11,215. That would give you the excess of income over expenditure for the particular year?—It would.

11,216. Have you extracted that anywhere?—I have, and it is in the report in paragraph 3. You have the total expenditure with a big figure opposite to it, and also lower down the total income.

11,217. The total expenditure is £1,275,843, and the total income £1,249,336?—Yes.

11,218. Those totals are the income and expenditure as shown in Schedule A, as extracted by you from the accounts sent in?—Yes.

11,219. Standing there that shows that these 304 farmers have for their income for the year ending Michaelmas, 1918, received less than they paid out?—Excluding the valuations, yes.

11,220. Exactly. I am dealing with the actual cash payments and the actual cash receipts?—Yes.

11,221. It is something like £36,000 less?—Yes.

11,222. Therefore Mr. Parker was quite right when he pointed out that the only profit as shown by these accounts is made by the excess of valuation at the end of the year over what it was at the beginning of the year?—Yes.

11,223. Looking at Schedule A, in the circular sent out to these 304 farmers asking for their accounts, I see the item is headed: "Statement of assets and liabilities. Inventory at the beginning and end of the year," and it sets out the details of how that inventory is to be made out?—Yes.

11,224. Did these 304 farmers fill up this form?—Yes, they practically all filled up that form.

11,225. They took this form as it stands and filled it up?—Yes.

11,226. Are the figures appearing in paragraph 3 of your report, "commencing valuations £1,480,273," valuations that would be at Michaelmas, 1917, made up from this form which has been filled in by the farmers of their commencing values?—Yes.

Chairman: That is stated in the memorandum: "The results shown by the aggregate number of accounts dealt with under Classes 1 to 6 (304 in number) are as follows." It does not carry you a jot further. He says: "I have received these statements and these are the results."

11,227. *Mr. Cautley*: The ending valuations were £1,697,342?—Yes.

11,228. Was that figure made up in the same way from the detailed valuations made up by the farmers and sent in to you on this form shown on Schedule A?—Yes.

11,229. So you are in a position to deduct the valuation of all the details of the live stock and of the grain and the hay and the roots, and the other details set out in these valuations at the beginning and the end of the year?—I could not do that in quite all cases because, while I said that practically all the farmers did fill up this form of inventory, yet they might not, for example, have given me the numbers and the values of each class of their live stock; they might have given me a total money figure only.

11,230. Yes, they might only give you the amount they had in horses and cattle and dairy cows, and so on, and not tell you the numbers?—That is so, or it might be one figure for all the live stock—but that would not be in many cases.

11,231. Mr. Parker was quite right in his criticism, that the only profit made as shown by these accounts, at any rate, has been due entirely to the increase in the valuation at Michaelmas, 1918, as compared with the valuation of the stock in hand at Michaelmas, 1917?—That is so using the term "profit" in the sense in which I use it in the report.

11,232. I also see that in one passage in your report you say that the farmers for the main part adopted the market price as the basis of the valuation?—They did.

11,233. Does that apply to their machinery, for instance?—In a large number of cases, yes or it was stated to apply to it.

11,234. You do not really think, do you, that the farmer has increased the value of his machinery from year to year?—I do not know, I can only go by what they tell me.

11,235. They do not state specifically that that applied to machinery?—You will see at the bottom of the form they are asked to state the basis of the valuation, and in 148 cases they stated specifically that the market value was the basis adopted without any qualification. The meaning of that to me was that that market value basis applied to the whole of the inventory.

11,236. The meaning of it to me would be that it applied to the live stock and to the grain?—It may be so.

11,237. I should even limit it further and say that in the case of sensible farmers that would not apply to their working horses and what I call their plant?—Possibly not.

11,238. You have not really investigated that?—No, except to this extent: To take horses, the average value per head at the beginning of the year was £57 5s. 8d., and at the end of the year £60 13s. 2d.

11,239. Then you do know the number of horses?—In the great majority of cases, not in all.

11,240. I think you will agree with me from your experience that the average stock on a farm so far as quantity is concerned is pretty constant in ordinary pure farming?—I think that is so.

11,241. The valuation may be difficult?—Yes.

11,242. On the point of principle you stated in answer to one member of the Commission that in your view the cost price was the proper figure to put in the valuation of farm stock. If a farmer buys a six months old bullock, say, in November, is he to put down the cost price of that as the valuation at the following Michaelmas.

Chairman: The cost in a case like that is the original cost plus the cost of feeding up to the date you make the valuation. It would remain then at cost price.

11,243. *Mr. Cautley*: In a commercial industrial business I should entirely agree, where you can estimate exactly the manufacturing cost to a penny, that the cost price or the market value, whichever is the lower, I should add as a sound business proposition. You would agree with that, I suppose?—Yes.

11,244. Do you apply that to farming?—Yes.

11,245. I am afraid you are looking to a state of perfection which your Costings Committee may arrive at in 20 years' time?—That may be so.

11,246. That is really your view, that the farmer in valuing his stock ought to take the cost price and add on to it some estimate of that cost of feeding it during the particular length of time he has had it—that is up to the time of the balance sheet?—Yes. I think without any qualification cost is the basis to adopt. Whether the information as to the cost is in the possession of any farmer or not is another matter.

11,247. You see the difficulty of applying that test?—I do, quite.

11,248. Let me apply it to the wheat in the stack. Will you tell me how he is to arrive at the cost of the wheat he has in his stack which has been growing, so far as the wheat is concerned, during the last year, and the land on which it was grown has been prepared even the year before?—Yes, he would take account from time to time during his financial year of the different items of cost of growing that wheat, and when those items are all put together that is his cost.

11,249. Supposing the crop has failed. Do you not see where your valuation is going to lead your to? Is he to put that down as the value in that case? There is no value at all, is there?—I agreed with you a moment ago when you said the real value was cost or market value, whichever was lower, and he would probably adopt the market figure.

11,250. You qualify what you stated, and you now agree with me?—I always meant to say that it was cost or market value, whichever was lower.

11,251. Would it not be much simpler when you have got the market price, because your wheat has got to be threshed, and it is going to be sold to-morrow?—Very much simpler.

Chairman: That is not in the witness's proof. You

are asking him questions which as an accountant you might ask me.

Mr. Cautley: I do not want to throw any cold water on Mr. Howell. I know the good work he is doing, but my point is that it will be years before he arrives at any practical result.

Chairman: I think you are asking a theoretical question which any accountant would answer in the same way as Mr. Howell has answered it.

11,252. *Mr. Cautley*: I think Mr. Howell has told us that the farmer ought to make up his accounts in the same way as a man in an industrial business would make them up. That is where I differ from him, and I want to test Mr. Howell and show that in our present state of practical knowledge it is impossible. You will not admit that?—No. I admit it is difficult.

11,253. And almost impossible?—I would rather not answer that.

11,254. *Mr. Ashby*: You have been asked some questions about the representative character of the farmers who supplied you with these accounts. Have you any definite opinion as to their representative character?—No, I have not.

11,255. Would you look at paragraph 2 of your report. The total number of tenant farmers there is 128 and of owner occupiers 95, and of home and similar farms 83?—Yes.

11,256. That is to say, that the number of owner occupiers and of the home and similar farms greatly exceed the total number of tenant farmers?—Yes.

11,257. Therefore, taking the whole group as it stands it is very unrepresentative of conditions both in England and in Scotland?—Yes.

11,258. We have only roughly about 13 per cent. of owner occupiers in both countries which includes as a matter of fact owner occupiers of home farms. That is an extremely important point, but I will not deal further with the representative character at the moment. Turning to some of your other figures, taking the acreages you have accounts from 113 tenant farmers in England representing an acreage of 42,154. That is an average roughly of 373 acres each which is rather high, is it not?—Yes.

11,259. In Scotland the number of tenant farmers is 13, with an acreage of 5,211, which gives the average size of the farm as about 401 acres?—Yes.

11,260. That again is rather high. Have you any idea as to how much the actual acreages vary from these averages. You would have more 300-acre farms for instance, than 100-acre farms in England, would you not?—Yes.

11,261. Taking the tenant farmers of mixed farms, if I might speak of those for the moment, from 1 to 100 acres, there are eight with an acreage of 509 acres. Between 101 acres and 300 acres of tenant farms, mixed farms, there are 31 with an aggregate acreage of 6,116 and from 300 to 500 acres the same class of farms there are 26 with an aggregate acreage of 9,900.

11,262. *Chairman*: These are the figures you have promised to send in to us?—Yes.

11,263. *Mr. Ashby*: The cases I have called your attention to are sufficient for my purpose for the moment. Now will you look at the Table in paragraph 3. The amount of profit of tenant farmers per acre in England is £69,242. If you turn to Table A the valuation increase there is £55,677?—Yes

11,264. That leaves you a difference of cash profit of £13,565 in the case of tenant farmers in England and Wales?—Yes.

11,265. Pursuing the same procedure in the case of the tenant farmers of Scotland there is a cash profit, but the valuation increase exceeds the total profit?—Yes.

11,266. In the case of owner occupiers in Scotland there is again a cash profit?—Yes.

11,267. In the case of the home farmers in England the valuation increase is vastly in excess of the total profit?—Yes.

11,268. As a matter of fact it is nearly £40,000. As regards the home farms in Scotland you have again a cash profit. So that as a matter of fact in all the cases, except in the case of the English owner occupiers and the English home farms, you have a cash profit?—Yes.

11,269. You say at the bottom of the table in paragraph No. 4, that the valuation increase amounts to £1 9s. 7d. per acre?—Yes.

11,270. At the end of the statement of Financial Results in paragraph 3 you say that the total profit per acre is £1 6s.?—Yes.

11,271. Would you be surprised to learn that the excess of the valuation increase over the cash profits in the case of the English owner occupiers and of the English home farms exactly accounts for the difference of 3s. 7d. per acre between that excess in the valuation and the total profit per acre?—I take your word for it that that is so.

11,272. So that as a matter of fact you have on the two classes of tenant farmers in England and Scotland and the owner occupiers in Scotland and the home farms in Scotland a plus difference—that is a cash profit—of £29,000?—Yes.

11,273. But with the small number of English owner occupiers and English home farms you have this position that your valuation increase exceeds your total profit to the amount of £55,000, so that if you rule out the English owner occupiers and the English home farms—which after all are quite unrepresentative there are not more than three in 100, taking the whole of the country together—you reach totally different results than you do by grouping all these figures together?—Yes, that is so.

11,274. I want to push that a little bit further. Taking your total profits per acre—that is including the valuation increase—you have tenant farmers in England with about 373 acres each with a profit per acre of £1 12s. 10d., which is roughly £613 per farm, and tenant farmers in Scotland with 401 acres each with a total profit of £1,254. Owner occupiers in England with about 450 acres each with £1 6s. 2d. per acre total profit and an income of about £578.

Chairman: Is that not rather a speech to the Commission, Mr. Ashby? It is not asking a question of the witness. He is going to give us further information.

Mr. Ashby: A statement has been made in this room by two Commissioners that there was no profit on these farms except the excess in the valuation, which is not true in the case of certain classes.

Chairman: You can make a speech to the Commission and point out why it is not true, but the witness can only put the figures before you.

Mr. Ashby: I am quite willing to hand my tables to the Secretaries, and the witness can check them. Perhaps that will be the better way.

Chairman: If you will do that.

Mr. Ashby: Certainly. (*Handing documents.*) In the case of the tenant farmers in England and in Scotland and in the case of the owner occupiers and of home farms in Scotland there is a considerable cash profit. The figures can be arrived at by anybody who likes to take the trouble.

11,275. *Chairman (to the Witness)*: Will you look through these tables of Mr. Ashby's and tell us whether you agree with them?—I should have liked to have had time to do more of this work before sending in the report, but there was no time to subdivide the statements any further.

11,276. I understand you are going to subdivide them and Mr. Ashby's notes will be very useful to you for that purpose?—Yes.

11,277. *Mr. Batchelor*: Do you know from the information put before you with regard to the accounts whether as a matter of fact there are larger numbers of live stock and larger quantities of dead stock on hand at the end of the valuation compared with the beginning?—I know as regards live stock that there are larger numbers of live stock on hand at the end than at the beginning, except in the case of dairy cows, which show a decrease. As regards dead stock I have comparatively no quantities at all.

11,278. Will you look at Table F. I notice that the rents of the English tenant farmers are £42,916 and the profits £69,242, which is considerably less than double the rent?—Yes.

11,279. Do you know if any of these accounts were made up and used for the purpose of satisfying the Surveyor of Taxes that Schedule "B" was too high an assessment?—I have been informed by a few farmers that that was so.

11,280. Did they mention whether or not the accounts submitted to you were accepted by the Inland Revenue?—Yes, they were.

11,281. *Chairman*: We are very much obliged to you, Mr. Howell, and I will see that you have those notes of Mr. Ashby's, and if you could prepare some statements confirming or otherwise the memorandum of Mr. Ashby we should be much obliged, and also for the further statements of the costs which you will be perhaps kind enough to send to us?—Yes.

11,282. It may be necessary to ask you to come here again. You will not mind doing so if necessary, will you?—No, I should not; I should be very pleased. Besides these other statements which should now be on the way to you there will probably be more information again that I should want to put in in order to complete the whole lot.

11,283. If you please. We will also let you know with regard to the point raised by Mr. Langford as to calling individual farmers, and we will ask you to ascertain from those persons whether they are willing to give evidence as regards their individual accounts?—Yes.

(*The Witness withdrew.*)

Mr. JAMES DONALDSON, National Farmers' Union, called and examined.

11,284. *Chairman*: The *précis* of your evidence has been printed and circulated to the members of the Commission?—Yes.

11,285. May I take it as read without reading it through?—Yes.

Evidence-in-chief handed in by witness:—

11,286. (1) The witness appears for, and on behalf of, the National Farmers' Union: He is a member of the Royal Agricultural Commission Committee, Chairman of the Parliamentary Committee and a member of the Council. He is also a member of the Oxfordshire County Council and Chairman of their Small Holdings Committee.

11,287. (2) The National Farmers' Union is the representative organisation of practical farmers in England and Wales. It has over 80,000 members, distributed all over the country, with 58 county branches and a large number of sub-branches. The controlling Council of the Union is composed of representatives of these council branches.

11,288. (3) The National Farmers' Union desires to submit evidence, as representing the farmer, before the Royal Commission upon (1) the costs of production of the various food-stuffs usually grown in Great Britain; (2) the financial results of farming, in which it proposes to submit profit and loss accounts and balance-sheets of representative farmers; and (3) the policy to be pursued, in the opinion of the Union, to develop agriculture in the future. To attain this end a Special Committee, called the Royal Agricultural Commission Committee, was appointed by the Union and has been sitting in continuous session since the appointment of the Commission was announced. The Union has spared neither time nor money in endeavouring to ascertain and collect the views of its members so as to be in a position to place before the Commission the considered views of farmers.

11,289. (4) In accordance with the wishes expressed in the letter received by the Union from Mr. A. Goddard, Joint Secretary of the Royal Commission, dated 1st August, 1919, the Union has directed all its energies, up to the present time, towards obtaining data upon the costs of production of the principal food-stuffs grown in this country. The compilation and presentation of costs is a matter for an expert and Mr. James Wyllie, a well-known and recognised agricultural costings expert, has been retained to advise the Union on this subject. With the collaboration of representative members of the Union a number of statements of costs have been obtained and are now submitted to the Commission for their consideration. Mr. Wyllie will attend before the Commission to explain the figures and the principles upon which they have been compiled. Any of the farmers whose statements are included can, of course, be summoned before the Commission, if required. It is desired to point out, however, that to meet the pressing request from the Commission to submit the Union's evidence upon the costs of production at the earliest possible date, it has been physically impossible to submit all the data upon this question that the Union would have wished. Another month or six weeks and the Union would have been in a position to have submitted probably twice the number of statements that are contained in Mr. Wyllie's evidence. The Commission will be aware that farmers, as a class, are not skilled accountants and the information required has not been readily available, but the Union has been at great pains to put forward only statements from representative farmers whose figures are based on reliable records and are above suspicion. The statements are now put forward as the most reliable bona fide evidence of farming costs that can be obtained.

11,290. (5) The terms of reference to the Royal Commission include the words:—

"To enquire into the economic prospects of the agricultural industry in Great Britain,"

and the Union, in submitting the first section of its evidence, viz., that of Mr. Wyllie on the costs of production, begs leave to submit the following observations upon the economic position for the information of the Commission.

11,291. (6) The economic future of agriculture is an interesting speculation and it is one which concerns the farmer very intimately. Like any other business man he wants to be able to make some assessment of the probable course of the market on which to frame his management. The statement is very generally made that the prosperity of the industry, regarded from the standpoint of the farmer, depends upon his ability to secure for his products a certain margin beyond his present costs of production, assuming that these will be also his future costs, or alternatively, a margin beyond the amount of what his future costs are likely to be. On the face of it this seems to be so obvious as hardly to require statement, and certainly not to need demonstration. On examination, however, it becomes apparent that, so far from being a self-evident truth, the whole basis for the statement is the assumption that farming can be carried on only upon its present lines of development, and that it is not capable of adaptation to altered conditions, so that any material fall in markets, sufficient to put the farmer's receipts at a sum less than his present, or future, total costs, would necessarily entail disaster to the industry.

11,292. (7) This assumption is made, probably, by the public generally (if, indeed, the public ever thinks about the position of agriculture) and by not a few amongst the farming community itself. But most of the men engaged in agriculture, who have time to consider problems of economic development, are perfectly well aware that there are no grounds whatever for assuming that our present systems of farm management cannot be adapted, quite successfully, to meet falling markets. At the present time farming is being carried out intensively—as intensively as present circumstances will permit—with the object of producing the last possible bushel of wheat, the last possible pound of meat, and the last possible gallon of milk per unit area. The state of the market until recently justified this course; it paid to cultivate land that yields a relatively low return of produce; it paid to invest capital liberally in applications of labour and fertilisers on the better lands to raise a good yield to one even better; it paid to apply expensive feeding stuffs to the production of meat and milk. But if we visualise a time when present prices no longer obtain, when the market for all agricultural commodities has suffered a considerable decline, there are, nevertheless, no grounds for assuming that farming cannot continue remunerative both to the farmer and to the worker. To meet the new condition, however, drastic modification of present systems of management will, of course, be called for. Intensive farming—the attempt to bring the last

bushel from the soil—is a costly business. It is quite true that the yield may be increased by careful cultivation of the land and by manuring liberally, but whether the cost of these workings and fertilisers is to be justified depends upon the market price of the product. As Lord Ernle, himself, has pointed out, the general law which agriculture obeys is the law of diminishing returns (Prothero, R.E. "Patriotism and Agriculture," *Edinburgh Review*, October, 1915) and in proof of this he quotes a Rothamstead experiment where the application of 200 lbs. per acre of a complete fertiliser to a wheat crop gave an increase in crop of 18 bushels, whilst a further 200 lbs. gave an additional increase of 8 bushels and the application of a third dose of 200 lbs. added only a further increment of 1·6 bushels. With high prices, and on a rising market, then, there is every justification for a vigorous policy of management on the farm, and the farmer should farm high and stimulate his land to produce its utmost. On the other hand, with low prices, or in the face of a falling market, the reverse policy is indicated—all idea of intensive farming with consequent high production must go. The mistake that brought disaster to so many men in the 'eighties and 'nineties was their attempt to keep up their production in the face of a falling market. "High farming is no remedy for low prices," and thirty years of low prices have burned this lesson deep into the minds of most farmers.

11,293. (8) The remedy for low prices is the reduction of costs and the reduction of output. This was clearly demonstrated in England during the agricultural depression, and the same lesson may be read by anyone in the history of agricultural development in the new countries. In England there were men who made money during the depression; by good luck, or good judgment, they realised that the time for intensive farming had gone, and by a drastic cutting of costs and a reduction of output they made good during the longest spell of adverse markets that the agricultural industry has ever had to face. Most of them achieved their purpose by giving up arable farming, but, here and there, men stood out conspicuously as successful arable farmers, who, by occupying larger areas of land, and applying the minimum of capital to it, were able to take a small acreage-profit which in the aggregate fully justified them as managers farming successfully to meet the conditions of the day. In the newer countries the conditions under which men have had to produce have been exactly the same. If the cost of the long rail and sea carriage be taken as a set-off against cheaper land, the American farmer was face to face with the same problem, and he solved it in the same way; he applied the minimum amount of labour and capital to his land and made no attempt to increase the yield of his land above its natural capabilities, with the result that, with a crop of only half the quantity averaged in this country, coupled with wages on a scale that we never knew he was able to succeed while we failed.

11,294. (9) That which some men did in England during the depression, that which men have always done in the new countries, can be done by men generally in this country if the market drives them to it. They can cut down their fences and lay fields together for mechanical cultivation in large areas; they can thus reduce their labour bill while paying high wages, at the same time, to the men retained; they can cut down their expenditure on manures applied and cultivations done to increase the fertility of the soil, and at the end of it all with reduced productivity, and costs even more reduced, they can make their farming (or ranching) pay. Going a stage further, they can lay large areas of the less fertile arable lands down to grass, and in the last resort they can, if necessary, lay the whole country down to grass, and English agriculture can become once more a primitive pastoral industry.

11,295. (10) All this can be done, step by step, as necessity dictates, but it is important to remember that it will not bring disaster either to the farmer or to the worker. Farming can be carried on profitably even under the extreme conditions imagined above, and labour can be paid high wages at the same time. But it must be borne very seriously in mind that in proportion as market conditions force this policy upon the controllers of the industry, so will production and employment be reduced. Every successive change in the downward direction will reduce the output of wealth from the soil, and will reduce the number of the rural population. Some of them, both farmers and workers, will be crowded out, but it will not bring ruin to the farmers nor destitution to the farm workers that remain.

11,296. (11) The National Farmers' Union feel, therefore, that this question of the economic future of agriculture is a matter more of political concern than of industrial concern. Does the country need the maximum production from the soil of the country? Does the country need closer settlement of its rural areas? As good citizens the members of the National Farmers' Union would deplore the establishment of conditions which made for low production accompanied by a large measure of depopulation. As business men they are quite prepared to meet these conditions and to adapt their management to them. The repeal of the Corn Production Act and a return to the unrestricted play of the law of supply and demand, would not, taking the long view, do injury to the farmer nor to the workers as individuals; certain of the farmers would adapt themselves to the new conditions in the ways indicated above, and those of the workers who were still employed would secure by collective bargaining that which they now get through the Agricultural Wages Board. But the nation would lose heavily in output at a time when home production is the thing most needed for national rehabiliation, and it would lose in healthy manhood at a time when the creation of an A1 population is the concern of all who have its true welfare at heart.

11,297. (12) The decision, then, as to what steps should be taken in regard to the future development of agriculture is one of political rather than of industrial importance. The members of the Royal Commission will have realised this obvious fact, and it is of vital importance that the nation, as represented by His Majesty's Government, should also face up to it, and at once. British agriculture stands at the cross roads; under the stimulating influence of Lord Lee, when Director of Food Production, English farming reached a level of output during the War which this generation has never known, but the War is won, and whilst war costs are likely in a large measure to be permanent, it can only be a question of time before war markets break. If it is the wish of the nation that the farmer should maintain and develop his output, whilst, at the same time, meeting the reasonable demands of labour, the nation must see to it that when he has taken all possible steps to organise his business, so that wasteful and inefficient methods are eliminated, he can then get a fair return on his capital, having regard to the vicissitudes to which agricultural enterprise is peculiarly liable. It may be that by some drastic reforms in our agricultural system, such as by a great extension of the practice of co-operation amongst farmers, or by the development, on a large scale, of what is sometimes called "factory farming," or, at the other extreme, by a wide increase in the number of small holdings, or by each and all of these methods, agriculture can face the possibility of a severe decline in prices without the necessity for a reduction of output. On the other hand it may be that production and employment in the future depend upon guaranteeing to the farmers certain prices, on the principle of the Corn Production Act, for certain periods, and the actual figures being subject to revision, from time to time, in the light of changing circumstances. We do not know, but it is the expectation that the Royal Commission will want to examine these questions and the National Farmers' Union are taking steps to collect material in the hope that it may be of assistance to the Commission in their work.

[*This concludes the evidence-in-chief.*]

11,298. *Sir William Ashley*: The other members of the Commission will ask you more technical questions no doubt with regard to farming, but I should be glad if you would expand a little one or two of your

general remarks in the statement you have put in. In pointing out that the economic future of agriculture is a matter more of political than of industrial concern you go on to mention in paragraph 11 some of the considerations which you think might conceivably be raised from the political point of view and after referring to the Wages Board you say that the Nation might under certain conditions lose in healthy manhood at a time when the creation of an A1 population is the concern of all who have its true welfare at heart. What exactly had you in mind when you used that phrase about healthy manhood?—The more men you employ on the land we consider the healthier population you will have. We think that the country, taking it on the whole, can claim to have a healthier and perhaps a stronger population than the towns. With regard to the ideas set forward here, if you are going to say to agriculture: "You must adopt your own system and pursue your own ways," then we say "We are quite prepared to do so, but we shall not be able to employ so many men on the land and we shall not be able to give you such great production."

11,299. Have you got any tests of national physical health or physiological tests or statistics you would like to put before us in this connection?—No, I have no statistics at present, but I can refer you to an incident that took place during the war in one of our agricultural towns where 18 out of 20 townsmen at the Medical Board failed to class themselves as A1—I admit this was an exceptional case that morning. They were followed by a number of agricultural labourers and I believe all that failed to pass A1 were 5 out of 20.

11,300. This is a matter of such great importance that if you could collect definite statistical information bearing on that point I am sure it would be of value to this Commission. In the next paragraph you say: "War costs are likely in large measure to be permanent." What are the reasons which lead you to say that?—When this was penned we had labour in mind. I wish to make a statement with regard to that. Of course, you understand that 40 per cent. of the costs that have come before you are swallowed up by labour and we farmers know full well that in the pre-war period and for a long time previous to that our men were underpaid. It was a reproach to the farmer. We felt it, but at that time we were in a position in which we could not pay them more. We do not want to go back to that; the very last thing a farmer wants to do is to ask his men to go back to the low underpaid state of affairs which existed in pre-war times. What we are out for is that the labourer should be paid a wage commensurate with what would be paid to him in any other industry. We have not forgotten the fact that from 1880 to 1890, that period of terrible depression in the agricultural industry, these men stood by us unflinchingly and unmurmuringly, and if any success is to come to agriculture through this Commission having sat we feel that we should like to take our labourers with us and that they should share in our success.

11,301. Your anticipation of the future costs of agriculture is based upon your view as to what the future amount of agricultural wages will be?—Largely.

11,302-3. You go on to say "It can only be a question of time before war markets break." Would you expand that statement a little?—I do not think it wants very much expansion. We, as practical men, are afraid that prices will sooner or later fall and we have lived through a period of low prices in the past. With regard to war prices breaking it will not be very long before we have more shipping; there is no doubt about that. In the countries in the middle part of Europe that have been devastated by the war it will not be long before agriculture is again in progress. Russia is the only black spot at present, but by and by she will be producing more. Then you have new countries brought in such as Mesopotamia and Egypt and large tracts of India and in the Argentine Republic. All those have been brought in and those countries will have a definite bearing in reducing the price of agricultural products in the future, principally cereals.

11,304. You say: "The Nation must see to it that when the farmer has taken all possible steps to organise his business so that wasteful and inefficient methods are eliminated, he can then get a fair return on his capital." That seems to throw the responsibility for the inefficient organisation of farming upon the farmers themselves?—I do not take it so. Lord Lee has just issued a statement to the Agricultural Executive Committees—it was only in last week's paper—that they are to speed up the process by which the least progressive farmers should be made more progressive and eliminate the wasteful men altogether. From that it seems to me that Lord Lee has taken it upon his own shoulders to see that farmers are speeded up through the Committees.

11,305. That may be a very good ideal, but can you suggest a way by which the Nation can assure itself that the farming community have taken all possible steps to organise the agricultural industry?—Prices have been against us in the past and if that is going to be the case in the future we should certainly have to do as this statement here points out. We may be forced to do it in the future; that is the fear which is before farmers at the present time. I do not think you are going to do anything towards it by smallholdings.

11,306. You suggest that the Nation should provide that the farmer should get a reasonable profit on condition that the farmer supplies certain requisites?—Yes.

11,307. Can you formulate any policy by which a certain prescription should be laid down for the farming community with regard to efficient organisation and management? As soon as we get some idea from the Government of what their wishes are we are prepared to help you as much as we can with regard to suggesting a policy, but until we hear what the Government propose to do I am afraid we cannot help you in regard to policy. I have no instructions to speak with regard to policy to-day.

11,308. *Dr. Douglas*: In reference to what you have just said you are not advocating any particular policy?—Not to-day.

11,309. Are you prepared to do so at a later stage?—At a later stage we are.

11,310. At present you are simply pointing out what you believe will take place if nothing be done to modify the situation?—That is so.

11,311. In your ninth paragraph you speak of what will take place if nothing is done. Do you conceive that the process of putting the land back to grass will be a rapid process?—It will be more rapid I think because of the points I enumerated before in answer to the previous questioning on account of the conditions which have been brought about during the war.

11,312. As compared with last year I find that there is a net reduction in the corn areas in England of 543,000 acres and in Scotland 113,000 acres?—Yes.

11,313. The reduction of the area under potatoes in England amounts to 157,780 acres, and in Scotland to 14,947 acres as compared with the year 1918. Corresponding with these reductions there is an increase of 162,780 acres of clover and rotation grasses in England, and in Scotland an increase of 45,329 acres. Are these the kind of results that you have in view?—Those are the things that will occur only they will be accelerated if any guarantee is withdrawn. At the present moment we have a guarantee, but it is the fear of what may happen in the future that is bringing those results about now, and through no definite policy being put before us.

11,314. That is the sort of result you anticipate?—That is the result, only it will be accelerated if no definite guarantee is given to us or if even the guarantee which we have now is withdrawn.

11,315. The extent of that result does not surprise you?—Not at all. That is the fear that farmers have. You must remember that farmers have not got rid of the fear of what happened in the 'nineties If the man who lived in the 'nineties has died he handed it on to his son. They had a terrible time then. I daresay you know that landlord and tenant together during that awful period of depression lost

830 million pounds—that is what it has been computed at at the least. It is staggering almost.

11,316. Do you think that a guarantee would alter the minds of farmers in that respect?—I should like to know what the guarantee is before I give an opinion on that.

11,317. I just wanted to ask you one or two points about that. What duration of guarantee do you think would be necessary in order to remove that anxiety on the part of farmers?—Taking a long view or a short view?

11,318. That is what I wanted to ask you. Do you think that a long view is necessary or a short view or a combination of both?—I think the long view is necessary, but if you did not feel justified in going in for the long view I regard 8 to 10 years as the short view.

11,319. I suppose you realise the difficulty of forecasting what price conditions may be over a period like that?—Undoubtedly.

11,320. Have you anything to say on that subject?—No—you are leading on to policy now.

11,321. You would be prepared at a later stage to say something about that?—Quite.

11,322. Would you attach any value to a still shorter view as a temporary and emergency measure—to a statement with regard to a single year or to two years, for example?—We have had these short temporary measures already and the result is, as I said, that we are going back very gradually to pre-war conditions as regards grass and other things. It is not for me to say, but my own personal opinion is that if you are going to benefit agriculture at the present moment the sooner you get a long policy rather than a short one the better. The short policy has been tried and in my opinion it has been found wanting.

11,323. You think that it is of comparatively little value?—I think it is of comparatively little value at the present moment.

11,324. Regarding 8 or 9 years as the short view, what would you regard as the long view?—A permanent policy.

11,325. I do not want to take you on to subjects that you do not want to discuss just now, but it is quite evident that a permanent policy could not be a policy with fixed figures of any kind—it would need to put forward figures based upon some principle?—Yes, I quite follow. Of course we may say nothing on this earth is permanent.

11,326. Quite so, and not even farming?—I think you have grasped my meaning. By permanent I mean something extending over a longer period than from 8 to 10 years.

11,327. Something not fixing definite figures, but fixing the principle upon which prices should from time to time be based?—Exactly.

11,328. Do you not think even with regard to what you call the short period—the 8 or 9 years' period—that something of that sort would probably be more satisfactory if it could be arrived at?—I would not go so far as to say it would be much more satisfactory than a one or two years basis.

11,329. I mean a basis of principle would be much better than an attempt to lay down figures 8 to 10 years in advance?—I am afraid that perhaps your idea of what our policy may be and our ideas may not quite coincide. You are touching on policy here and I would rather reserve the question of policy until later on.

11,330. Yes, but one question we have to deal with is the question of the present emergency, and that must be dealt with quickly?—I take it that this Commission is sitting here to-day for the purpose of advising the Government in their Interim Report with regard to next year's prices.

11,331. Upon that assumption what would you say?—As to next year's prices?

11,332. Yes?—I think I must leave it to you gentlemen to judge of that after having heard all the evidence.

11,333. Anything you have to say regarding any long period would be really infringing on the general question of policy, and, therefore, you would rather not deal with that now?—That is so.

11,334. *Mr. Rea*: In answer to one of Dr. Douglas' questions you said that the agricultural industry had lost a very large sum of money during the 30 years before the war?—Yes.

11,335. Do you think that those losses have been made good during the war?—Certainly not.

11,336. Your view is that the profits which have accrued during the last five years have not counterbalanced the losses during the previous period of depression?—That is a difficult question, but I can give you my own experience. Were I to-day in a position to realise my crops and my stock and my implements at the inflated prices prevailing owing to the war I should certainly go out of my farm very much better than I would have done 4 or 5 years ago to a large extent, but I am not thinking of doing that, and the great majority of the farmers of England are still thinking of keeping on, and, therefore, I regard that inflated value as only being a *pro tem.* value, and when prices drop the value of my implements and my stock will drop likewise. I, therefore, look upon these inflated values as being money that is simply loaned to me for the time being. That is my view of the practical position.

11,337. That is really what I was putting to you—whether you are not carrying over what are simply paper profits to a large extent?—Exactly.

11,338. Do you think that very much of the cash profits of the last 3 or 4 years have been due to deterioration of the land more than was the case in pre-war times?—To a great extent. The Government asked us to grow every possible acre of cereals and other products that we possibly could do and we did so, but we know we did it at the expense of the land and it is no use trying to disguise the fact that our land to-day is not in as good a condition from the ordinary farming point of view as it was prior to the war.

11,339. Of course, during the war you had not the labour with which to do it?—No, we had not the labour and what we did have was unskilled.

11,340. Do you think for the future safety of the country that arable cultivation should be kept up?—I do. I go so far as to say that, in my own opinion, it is necessary from the point of view of the safety of the country as well as from the point of view of a stronger and healthier population, as I have put down here in my statement.

11,341. It is really a national matter, more than a farmer's matter?—Yes, political rather than industrial, as I put it here.

11,342. So that, if the guarantee were given, do you consider that it would be for the benefit of the farmer or for the benefit of the nation?—If you are going to take agriculture along with you, it is certainly going to be for the benefit of the farmer, the labourer and the nation; I would include all three.

11,343. In your evidence-in-chief you point out that the farmer has an alternative agricultural policy—that he can produce less and employ less labour and still make a profit for himself?—Yes. That, I point out also, is not for the benefit of the nation, in my opinion.

11,344. That is simply put forward as an alternative?—Simply as an alternative, but it is an alternative that is not going to be for the benefit of the nation, according to my way of thinking.

11,345. You think the farmer would only do that if he was forced to do it?—Exactly.

11,346. But to enable him to carry on the cereal cultivation on a scale not less than the present, you think a guarantee of some sort is necessary?—I think that is undoubted, and to enable us to pay the wages that we wish to pay and feel that we ought to pay. I never want that to be forgotten.

11,347. Without a guarantee do you consider that the Corn Production Act ought to be done away with altogether—that all control on both sides should disappear?—Will you repeat the question?

11,348. Suppose it were decided that no guarantee should be given, do you think that all the other provisions of the Corn Production Act ought also to be done away with—that is, the Wages Board and so on?—Yes, but that is policy again, I am afraid, and I have rather pronounced views with regard to that,

which I would prefer to bring forward at a later stage, when you have reached the question of the policy.

11,349. You also point out that if prices fall, the law of diminishing returns must come into operation, that is to say, it is only when prices are good that it is profitable to expend large sums on production?—That is so. You cannot get away from the law of diminishing returns.

11,350. You think that law will operate in the future, as it has always done in the past?—Undoubtedly.

11,351. Of course, that will all tend to the laying of land down to grass and to decrease employment?—Undoubtedly.

11,352. Do you think there is much room for improvement in farming generally—that a large proportion of land is not producing what it ought to do?—Are you taking it at the present moment or are you going back to the pre-war period?

11,353. I am rather speaking generally, including the pre-war period?—I think the cultivation was as intensive as the prices would allow us to make it.

11,354. *Mr. Overman*: I am very anxious not to infringe upon the question of policy which I think you rightly keep out of this preliminary statement that you have given us. I think I may take it that you, representing the Farmers' Union, put this forward as the considered view of the large body of farmers which you represent, as the alternative to what may happen if farming is not conducted and carried on in the interests of the State as it should be?—That is so. This statement I may tell you has been before the Council of the National Farmers' Union and has been discussed and endorsed by them.

11,355. You really are introducing Mr. Wyllie, who is bringing forward figures as to the cost of production?—That is so. We were asked to concentrate our attention first on cost, next on results, and, thirdly, on policy. We have done so, so far as costs are concerned.

11,356. I am very much struck with one remark you make in paragraph 7, because it bears out what we who are geting into old age have been through: that high farming is no remedy for low prices and that the alternative to that is the cutting down of costs which means the cutting down of production?—Yes, that has been and still is my view.

11,357. Is it your experience that land at the present time is going down to grass?—Undoubtedly, unless the Government gives some definite agricultural policy for farmers to go upon.

11,358. Unless that comes forward soon there will be a good deal more land down to grass than there is already?—Yes, it is going down to grass now simply because of the lack of any definite guarantee.

11,359. In answer to Dr. Douglas you said that a guaranteed price would benefit the nation, the farmer, and the labourer. We have no doubt of that, but do you not think that it would benefit the nation a good deal more than it would benefit the farmer and the labourer?—If you ask me which will benefit most I should say the nation.

11,360. It must do that?—Yes.

11,361. *Mr. Batchelor*: During war is it the case that a considerable amount of land was put under cultivation which it would have been far better to have left in grass?—That depends how you look at it. If you look at the interests of the nation during a war period you have to consider the nation's interest as a whole. Farmers have always been good citizens, and I hope they will always continue to be so, and I think we looked upon it not as a matter of our own gain during the war, but for the nation's benefit that we should break up that grass land.

11,362. What I want to get at is, was there sufficient investigation with regard to the kind of grass land that was broken up?—As a member of the Committee that was responsible for a great deal of grass land being broken up perhaps I may say that in some cases it would have been better if a few of the fields had been left down in grass, but in the great majority of cases I think we were quite justified in asking the land to be broken up that we did.

11,363. In those cases where it would have been better if the land had been left in grass, will there be great difficulty in getting that land put back into as good grass as it was in previous to the war breaking out?—There certainly will be some difficulty, but the question which arises in my mind is whether that land is going to continue as arable land. If it is going to continue as arable land the great trouble is that the ditches and drains have got blocked up. Are you going to improve that land? Is the nation going to make it worth our while to improve that land and make it a good arable proposition?

11,364. Do you suggest that the bulk of the land which has been been broken should now that the war is at an end continue to be kept under arable cultivation?—In the nation's interest, yes, and I believe farmers would be quite prepared to do it, provided it was made worth their while.

11,365. Do you not agree that there is a certain proportion of such land which has produced far less food for the nation in the character of arable land than it would have done if it had been left in good grass?—That might be; I am not going to attempt to controvert that statement at all. In some instances I know that is the case. I can quite agree to that, but I do not think there was any great proportion of it.

11,366. I suppose you would agree that in England in very many instances there has been a lack of accommodation, buildings and implements and probably also of knowledge on the part of farmers in regard to arable cultivation?—Why a lack of knowledge?

11,367. Because of their not having had experience in the past of arable cultivation—their want of experience?—Experience of cultivating that particular type of land?

11,368. Exactly?—That may be so in a few solitary cases, but not as a whole.

11,369. In a great many cases of farms which were previously practically grass farms, where could the farmer get his knowledge and experience of what that land was capable of producing under arable conditions?—That was a difficulty, but that is one of those difficulties which farmers would soon get over.

11,370. Yes, but you have to gain experience?—Quite.

11,371. In many instances in England farm buildings have not been in the past suitable for arable cultivation on these grass farms?—No, and they are not yet.

11,372. To put them into suitable condition would require a very vast expenditure of money?—It would require an expenditure of money undoubtedly.

11,373. Would it not be better and cheaper, in the long run, for these farms to remain in grass than have that great expense to get them into arable cultivation?—You are arguing from the farmer's point of view, and I am looking at it purely from the national point of view.

11,374. No, I am looking at it from the national point of view?—Take my own county as typical. I know that grass land could be broken up profitably and turned into arable if it was made worth the farmer's while to do it, and in that case a good deal more labour could be employed upon it. I do not get away from it if it is made worth while.

11,375. In the making of it worth while, is the nation not going to spend more money than it is worth in doing it?—That would be for the nation to judge.

11,376. What would you say?—I am not going to give you my idea, because I am not competent. If the Cabinet is not competent to form an opinion as to that, then I am sure my meagre knowledge would be of no use to them at all.

11,377. *Mr. Ashby*: Will you look at a sentence in the middle of paragraph 7 of your evidence-in-chief, a rather important sentence, I think. It says: "At the present time farming is being carried out intensively—as intensively as present circumstances will permit—with the object of producing the last possible bushel of wheat, the last possible pound of meat, and the last possible gallon of milk per unit area." Do you not, from your experience as a farmer, think that that sentence needs an addition of something like this—within the limits imposed by the present amount of technical knowledge and experience possessed by farmers?—No, I should say the farmers possessed all the technical knowledge and experience necessary at the present moment to comply with those conditions, if it were made worth their while.

11,378. You produce milk, do you not?—No.

11,379. But you are more or less conversant with the dairying industry, I take it?—I know a little about it.

11,380. For instance, do you know that on fairly good tenant farms the yield of milk per cow varies between, say, 400 and 600 gallons per annum?—Yes, quite.

11,381. And there is very little difference between the cost of feeding a 400-gallon cow and quite frequently the cost of feeding a 600-gallon cow, and to that extent you have not reached the last gallon of milk per unit area even if returns are increasing or decreasing?—That is being remedied now by the Milk Recording Societies.

11,382. Take another instance, the case of the dressing of grass land with basic slag. Assuming that you can get supplies of basic slag, the point has not yet been reached where you get diminishing returns if you get farmers to use it who never used it before?—You must remember that this method of using basic slag is a matter of comparatively recent date. There is no doubt that a greater proportion of the farmers know the value of basic slag to-day.

11,383. But there is a certain proportion of farmers at any rate, who do not apply the best technical knowledge and experience that is applied even by their own neighbours?—A very small proportion. If a farmer finds his neighbour is making a good thing out of it by buying a certain thing, you will find that that farmer imitates him anyhow.

11,384. Following up that point, in that same paragraph you have a quotation from Mr. Prothero, as he then was, on the law of diminishing returns. I suppose you realise that any statement of physical tendencies like the law of diminishing returns always postulates certain conditions, and that as far as finance is concerned, that is, the financial results with which the farmer is concerned, you do not necessarily reach the point of diminishing financial returns at the same time as you reach the point of diminishing physical returns?—I think your question is rather complicated to my limited intelligence: but if I could refer you to the source from which this extract was drawn, you will find there, I think to your own satisfaction, that the law of diminishing returns does apply. I do not think you can controvert that statement there.

11,385. No, I am not controverting the statement as it appears in the article or as it appears in its present form here; but supposing your total costs, given a certain amount of fertilisers supplied—this is the way they reach law of diminishing returns—also reach a given figure, if you can economise on any item of your total costs, say, on your labour by using machinery, you can still go on adding to your manures, which are on the plane of diminishing returns, and yet not find diminishing returns in financial results?—Yes, but in order to obtain the best effects of machinery, you must have a large farm.

11,386. You go on to say something about that afterwards?—Yes.

11,387. But again let me put to you. Do you consider that, taking the application of fertilisers alone to agriculture, there are no cases in which you could not get increasing returns rather than diminishing returns?—Not if you exceed a certain point. The law of diminishing returns applies irrevocably. You cannot get beyond that. If you are speaking of a farm which would respond to fertilisers which has had no fertilisers applied to it, that is quite a different question.

11,388. That is exactly the point: if you have reached the point, generally speaking, where you get diminishing returns, or, are there not a great many cases in which you could get increased returns?—Broadly speaking, if you give us a favourable supply, we shall employ more fertilisers. Even the most uneducated will be led up to it.

11,389. Just at the end of that paragraph there is rather a specious sentence which passes current that "High farming is no remedy for low prices." You do not suggest that the yields of English arable land were falling from 1875, say, to 1907, the period of the depression?—That they were falling?

11,390. That the yields were decreasing?—I should answer that question by stating that those lands which were not capable of giving a certain increase were put down to grass, and therefore you had the more fertile lands, and if your returns did not diminish it was due to the increased fertility of the soil. By the fertility of the soil I mean that you are only using the most fertile soils and allowing the other soils to go into grass.

11,391. That is a true statement so far; but on the other hand is this not true: that, though you were raising your average of arable land, and you were, as you admit, getting rid of the worst of it and maintaining rather increasing yields on what you had left, you were also considerably increasing the productive capacity of the live stock?—Yes; I think with regard to live stock we take a position second to none to any country in the world. Would that not point more and more to adapting ourselves to grazing agriculture?

11,392. Yes, but surely it is one type of high farming?—Yes, exactly, if you like to call grazing high farming.

11,393. Take one instance alone. So far as we know the average yield of cows from 1890 to about 1908 was increased from 120 to 130 gallons a year?—Due to better selection.

11,394. Partly; and better treatment?—I think it shows the progressive mind of the farmer.

11,395. Then in paragraph 9 you say that farmers "can cut down their expenditure on manures applied and cultivations done to increase the fertility of the soil, and at the end of it all with reduced productivity." You are rather, I take it, drawing a parallel between what did happen in the depression and what might happen in a future depression?—I think they are statements of yours.

11,396. Is it true that farmers during the late depression cut down their expenditure on fertilisers?—I do not think there is any doubt about that, because the price paid to them did not pay for it. It altered the returns again. You cannot get away from it.

11,397. But surely the consumption of fertilisers in this country was rising during the whole of the time?—What fertilisers?

11,398. Superphosphate, basic slag, nitrate of sodium and sulphate of ammonia, which was quite a recent thing?—With regard to superphosphate and basic slag, I could account for that quite easily by saying it was applied to the pastures and not to the arable land.

11,399. Of course, we are on more or less debatable ground, but I think you would find, as far as you can get any comparable statistics, that the use of fertilisers was increasing, ruling out basic slag, during the depression?—But you cannot point me to statistics showing that more fertilisers have been used on arable ground, can you?

11,400. I want to suggest to you that the real economies that the farmers made in the depression, were not economies in fertilisers but economies in manual labour?—That is a matter of opinion.

11,401. Is it also a matter of opinion that, although it may be true that the yields per acre were falling during that period, the yields per man engaged or employed were rising?—That may be so.

11,402. I want you to consider a moment your statement about the A 1 population. I suppose you are aware that the proportion of the population of this country which could be described as rural is only about one-sixth of the total?—Yes, I agree to that.

11,403. Do you think that any increase in the rural population, say you made it one-fifth, would seriously affect the general physique of the nation as a whole? I do think it would help.

11,404. You do think it is essential that you should have a more numerous rural population? Yes; and another instance is, that if you have not got that rural portion of that population employed in the rural districts, by sending them into the towns you are making them compete with the industrial population there.

11,405. Do you accept the general statement that a city population must die out in three generations?—I am not a scientist.

11,406. Do you accept the general proposition that a city population cannot maintain itself?—I am not here to argue the point; and I neither say yes or no to it.

11,407. But I take it you would not accept the rather cynical position, that you must have a big rural population in order to maintain a city population that is dying out?—I know that has been put forward. I am expressing no opinion with regard to it

11,408. You would not accept it yourself, would you?—I am expressing no opinion with regard to it.

11,409. Surely you would not like to think that a son of yours or a son of your labourers had to go into a town to maintain the town population and have no grandchildren?—I express no opinion. I am not qualified.

11,410. It is rather important; because the only ground on which you can demand a more numerous rural population on the ground of health is that the town population is dying out and must necessarily die out. You do not accept the rather cynical view I put to you, do you?—Is not that an extreme view you are putting forward?

11,411. Those of us who do not accept that rather cynical position want to say that the place to get an A.1 population is the place where the population lives; and I think, if I may say so, that you rather confuse issues when you speak about population in your memorandum. Do you not agree?—It is again a matter of opinion.

11,412. *Mr. Cautley*: I understand that you come here as a representative of the National Farmers' Union?—That is so.

11,413. Is that an organisation to look after the farmers' interests?—Yes.

11,414. By that, I mean their business interests? Certainly.

11,415. Could you tell me how many members, roughly, it consists of?—I believe when we sent out letters asking for their opinions on certain statements, we sent out 86,000 letters; but, to be on the safe side, we will say 80,000 members.

11,416. Are all those engaged in farming?—Yes.

11,417. Every one?—I do not think you will find one who is not a farmer.

11,418. Is your opinion limited to England and Wales?—Yes.

11,419. You do not speak for Scotland?—No, certainly not.

11,420. So that we will take it to-day you are putting before us the views of 86,000 farmers of England and Wales?—80,000, yes.

11,421. And their trade interests?—And their trade interests.

11,422. What is it they want for next year?—For next year, that is for you here to decide. That is exactly what you are sitting here to do. You are deciding on evidence we are putting before you.

11,423. I am asking you, as representing the 86,000 farmers of England and Wales, what it is the industry wants to make the industry prosperous next year?—We say leave us to ourselves, and we will fight our own battle out. We put that before you in our statement. With regard to what we want for next year, I consider this Commission is sitting, and after they have heard evidence they will formulate their views and advise the Board of Agriculture, who will in turn advise the Cabinet; it is not for me to say.

11,424. Is it the position of the 86,000 farmers of this country that they do not know what they want?—For this year?

11,425. Yes?—That is the short view.

11,426. I understand you limited your evidence to next year?—For next year we have a decided promise from the Prime Minister. We are limited to next year.

11,427. I was asking you the views of the farmers of England?—With regard to what?

11,428. As to what they want for next year to make their business prosperous?—It is not what we want, but what we can get.

11,429. Very well. If that is the view, that the farmers are not going to assist us, I can understand their position?—But we are assisting you by every method we can think of.

11,430. On the contrary, who is more likely to know what is wanted to make an industry prosperous than the men engaged in the industry? The Commission might have to discount their views probably?—Is not it the case that the Government have interfered with agriculture?

11,431. Would you mind answering my question? I am. Is it not the case that the Government have interfered with agriculture during the war period?

11,432. *Chairman*: If you cannot answer the question of the Commissioner, then say that you cannot answer?—I was trying to answer it.

11,433. *Mr. Cautley*: My question is a very simple one. What do the farmers of England want to make their industry prosperous for next year?—We are not altogether concerned for next year. We are not taking that perhaps into consideration now, because of a promise expressed by the Prime Minister. You must take that as my answer.

11,434. You are contradicting yourself, if I may say so. You stated to almost every other Commissioner preceding me, that you would not speak to what you called a long view of the future, because that was policy and you had not considered that, but you had only come here to help the Commission as to next year. If you say the farmers have not made up their minds I can understand you; but I am asking you so that we can get it perfectly clear what the farmers want for next year?—If you ask me what the farmer has in his mind with regard to next year, and what we as a Farmers' Union have in our mind with regard to next year, we have come here to help you, and have spent no end of money in order to help you in regard to what we consider should be a fair price fixed next year based on the Prime Minister's promise. I can give you no other answer.

11,435. And the farmer has no opinion as to what is a fair price?—I can give you no other answer than I have given you. We have given you every assistance.

11,436. But, speaking on behalf of the farmers, are you not able to tell me what the 86,000 farmers think is a fair price to be guaranteed for cereals?—It is not for us to say what is a fair price to be fixed for cereals.

11,437. That is not the question I have asked you?—I have given you an answer to the question, and I refuse to say anything more.

11,438. So that on behalf of the farmers engaged in this industry, you refuse to say what they think ought to be done?—I have given you my answer.

11,439. *Chairman*: I would like to see if it is clear. Do you say the farmers refuse to say what they want in the way of a guarantee for next year, or do you say that you have no instructions from the farmers to express an opinion?—I have no instructions from the farmers to express an opinion as to what the price to be fixed for next year should be.

11,440. *Mr. Cautley*: Cannot you see that that is an extraordinary position to take up? The Commission is here to inquire to the best of its ability what is necessary to put agriculture in an economical and sound position?—For next year.

11,441. You have limited it to next year, but the Commission is engaged in more than that. I am

only taking your limitation. Even for next year, you cannot tell us what the men engaged in the industry want or think ought to be done?—What we were asked as a Union to do was, to get the figures in order that you should make your calculations and recommendations. That is the fixed idea of the Farmers' Union.

11,442. I have given you every opportunity.

11,443. *Chairman*: May I ask a question? I do not wish you to depart from instructions which you have received from the Farmers' Union; but assume that the Government desired you to maintain in cereal or arable culture the same acreage as you had in 1918, what guarantee of prices would you require? If you are not instructed to answer, then your answer to me is exactly what you have given to Mr. Cautley?—You put the question rather more clearly, if I may say so. There are certain factors which work against giving an offhand answer with regard to that. For instance, some landlords are raising their rents. Some have raised them very much more than others. Then with regard to the hours of labour, we consider, but we are not quite sure, that those are also fixed. We would require to take all those things into consideration with regard to that; but, as I said before, we thought this Commission was sitting to frame an opinion based on the costs of last year and possibly the results of last year, and set that figure before the Prime Minister which would satisfy the farmers next year. I cannot put it clearer than that.

11,444. *Mr. Cautley*: Do you think that that is of any assistance to the Commission?—I think it is. If those figures are of no assistance, why ask for them?

11,445. I mean the views?—If my views are of no assistance, I am sorry.

Chairman: I think he has answered the question as far as he will answer it.

11,446. *Mr. Cautley*: In answer to one of the Commissioners, you said that you did not want to go back to the 'eighties or the 'nineties: is that the view of the farmers?—We are afraid of that. We are afraid that what has been, may be.

11,447. Then the answer is you do not want to go back to that?—No one would, having experienced it.

11,448. I understood you to say that at that time the agricultural labourers' wages were driven down to a point altogether too low?—In my opinion, yes.

11,449. Would you agree with me that they went down to a point where it was impossible for them really to maintain life in the way of ordinary comforts?—I shall agree with you so far as to say they were underfed, underclothed, and very often underhoused.

11,450. Was that due to the fact that the prices of the commodities which they were engaged in producing were fixed from outside?—Largely.

11,451. Was there any other circumstance at all?—You have always to take into consideration the effect of bad seasons; but the bad seasons would not account for it all.

11,452. There were no more bad seasons in the 'eighties or 'nineties than previously. I should have thought the 'seventies were the worst?—Yes, 1879; 1893 was a bad year, and we never got worse than 1894, when we sold wheat at 15s. and 16s. a quarter. That was due to price.

11,453. And the price of wheat was not fixed by the English production at all?—No; it was fixed by other countries, Chicago and Odessa, as I said before.

11,454. We may take it generally the price of wheat is fixed in Chicago?—It has been.

11,455. It really comes to this, that you do agree with me, do you not, that wages were driven down to that terribly low level by reason of the fact that the prices of the articles which the men and farmers were engaged in producing were fixed outside?—Yes, and like any other manufacturer in the same position, the farmer turned to other sources. He gave up his arable cultivation.

11,456. And unless that state of affairs can be prevented from occurring again, the same thing is likely to happen, is it not?—I do not think you are going to be able to prevent the price being fixed outside, but you could, perhaps, give a guarantee.

11,457. Cannot you answer my question? Supposing the same sort of things were to occur again, that all the prices of the commodities which the men and the farmer were producing were to be fixed outside, is not the same result likely to happen again, that wages would be driven down?—Yes, given the same conditions.

11,458. Then what is the meaning of what you say in paragraph 7: "But if we visualise a time when present prices no longer obtain, when the market for all agricultural commodities has suffered a considerable decline, there are, nevertheless, no grounds for assuming that farming cannot continue remunerative, both to the farmer and to the worker"?—Will you go a little further?

11,459. No, if you please, I will stay where I am. You have just told me that if the conditions went back to free competition from abroad, as they were in the past, the same results were likely to happen?—I agree.

11,460. I agree with that, too; that is my own view. But you here state that there is no ground for assuming that farming cannot continue remunerative we will leave out the farmer—to the worker. Are the two statements consistent?—Quite consistent, because we have altered our methods entirely. We were altering our methods, and we are going to alter them still more.

11,461. Then, is it your view that the wages of the worker can be kept up by alteration of farming methods?—Undoubtedly, because we should be employing fewer.

11,462. Then you mean that the remuneration to the workers could only be kept remunerative to the worker by dismissing a large percentage of them?—The statement says so.

11,463. That is what you mean by that?—The statement says so.

11,464. Would you agree with me that to keep men employed on the farms and to keep them at remunerative wages, they must have the principle of the minimum wage?—Either the principle of the minimum wage, or perhaps what they get by collective bargaining through their unions.

11,465. Has collective bargaining through the unions ever been of any service to the agricultural labourer in the past?—It has not had much trial yet, but I should say in the future it would have.

11,466. What more reason have you to assume that that would maintain the wages of the agricultural labourer in the future rather than it has done in the past?—I think you may take all trades unionism and say that it has been a benefit to the worker.

11,467. I am not questioning that, and that was not the question I put to you. We have got the fact that the agricultural wages were driven down by foreign competition to a point almost impossible to support life, and certainly impossible to support life in reasonable conditions. Is not the minimum wage the only means of preventing that, assuming that you have this free competition from abroad for agricultural produce?—I should not say it was the only means, because if you make it worth their while with the collective bargaining that would take place through the Unions, and with the pressure put upon the farmer by the Unions, I should say he would be in a position to do so.

11,468. Then do you really mean this, turning to the bottom of paragraph 11: "The repeal of the Corn Production Act and a return to the unrestricted play of the law of supply and demand, would not, taking the long view, do injury to the farmer nor to the workers as individuals"?—To those who adapted themselves to the circumstances I think no. It goes on further to say so.

11,469. Is this the view of the 86,000 farmers whom you represent; that you wish to have the Corn Production Act repealed and go back to the law of supply and demand in dealing with labour?—We do not say we wish the Corn Production Act repealed; but we say if the Corn Production Act is repealed and a return to the unrestricted play of the law of supply and demand were to take place, then an alternative might happen. We put the alternative before you.

11,470. But I want to know what is your view. Is it your view that the Corn Production Act should be repealed or not?—I am not here to say whether the Corn Production Act should be or should not be repealed.

11,471. I do not want to be rude to anybody coming here, because you are voluntarily giving your evidence; but may I ask what service it is to us for you to come and speak on behalf of these 86,000 farmers?—It is for you to judge.

11,472. I have formed my opinion already?—I cannot project myself into your mind.

11,473. No; but although those questions may seem stupid to you they do not to me. You surely do not mean on behalf of the farmers that you want to go back?—I simply mean that this has been put before the Council of the Farmers' Union, who are representative of the whole, and it has been endorsed by them.

11,474. As you know their mind, do you mind telling me as a matter of fact do they advocate the repeal of the Corn Production Act so far as wages are concerned or not?—Is it not possible that there might be amendments made in that with regard to any future policy? I am not going to argue on policy at all. I have told you already I am not arguing on policy. Whenever policy comes up you will find it perhaps something different to what is embodied in the Corn Production Act if we have a chance of putting it before you. There I must leave the question. It is touching on policy again.

11,475. If you are the only witness we are going to have on behalf of the Farmers' Union, I must press these things, because we want information?—I am sorry I am such a dense witness.

11,476. Is it, or is it not, the view of the farmers that the Corn Production Act should be repealed, so far as it fixes the minimum wage, and that the wage question as between the employers and the employed should be left either to collective or individual bargaining?—At this stage of the proceedings I am not in a position to state.

11,477. Again you say you cannot tell us anything?—I am not in a position to state.

11,478. I suggest to you that unless it is, it is quite impossible, at the present moment, to go back from the minimum wage. Whether it has been rightly administered or not is a different matter. Do you accept that?—I accept that.

11,479. Then the two things are inconsistent, you see. Your acceptance of that proposition is inconsistent with this statement at the end of paragraph 11?—Would you allow me to remind you that the Corn Production Act is obsolete with regard to prices?

11,480. We are aware of that at the present moment; but we are dealing with next year?—And you are put in this position, I take it, of recommending prices for next year?

11,481. Assume that is one of the things?—Therefore, you are taking the place of the Corn Production Act, to some extent, in this Commission sitting here. That is my point all along, and I have tried to get that home.

11,482. Assume all that: you do not help us. You do not tell us what the price should be?—I have already said.

11,483. I cannot get on any further, and I will leave it there. Assuming you have the present minimum wages, are the farmers able to pay those present rates of minimum wages with the present guarantees?—That is for you to decide again, I take it.

11,484. On what evidence, if we do not get the farmers' evidence?—You are having some farmers' evidence, are not you?

11,485. Yes; but the National Farmers' Union evidence is what we want to get?—We are putting forward certain witnesses.

11,486. Yes; yourself and Mr. Wyllie?—I think you will find more.

11,487. Of course, if we are going to have more who will answer the questions, I will not pursue this. Am I to take it that you are not prepared to say, although you represent the Farmers' Union, whether the farmers are in a position to pay the wages?—I have already answered that question.

11,488. Would you mind answering it again?—No, I shall not repeat my answer.

At the request of the Chairman, the Shorthand Writer read the question and answer: "I cannot "get on any further, and I will leave it there. "Assuming you have the present minimum "wages, are the farmers able to pay those "present rates of minimum wages with the "present guarantees?—That is for you to decide "again I take it."

11,489. Is that the only answer you can give?—That is the only answer I am prepared to give.

11,490. If that is so, it is no good asking you whether you can make any suggestions as to what ought to be done to enable the farmers to pay those wages?—You see you have the Wages Boards, and they have a certain number of representatives. What they agree upon, that we should pay.

11,491. Yes, I am aware of that; and the question we have to consider is the making of a balance between the wages and the costs and expenses of the farmers?—I could answer your question more perfectly if you would tell me what sort of season I am going to have next year—if you would tell me whether I will get a two quarter crop or a four quarter crop.

11,492. That is one of the difficulties in the farming business, and I agree with you, that adds to the difficulty; but you have to take an average crop, and the most likely persons I thought who would be able to give information were persons engaged in the industry and had the industry in their hands?—Of course you have a free market to-day, you must remember, in two commodities; that is in oats and in barley. You have certainly a fixed price for wheat. It is said it is a free market, but we find it is not a free market. I do not know whether you mean by the present prices that there shall be a free market in all commodities next year? That has been perplexing me all the time. What fixed prices can you point me to with regard to oats and barley?

11,493. The position is this, to make it as plain as I can; that at present, as you have pointed out, the controlled prices of cereals, such as they are, are fixed under the Defence of the Realm Act. Next year, if nothing is done, the prices will be fixed under the Corn Production Act, and the price for wheat is 45s. and for oats 24s. a quarter?—Yes, that is putting it quite clearly now. That would be totally inadequate.

11,494. Now I have got something from you at any rate. Do the farmers consider that the prices, as fixed by the Corn Production Act, are totally inadequate, having regard to the present price of cereals and the present price of fertilisers, feeding stuffs, machinery, and the other expenses of a farmer?—The prices fixed by the Corn Production Act would be totally inadequate; but as I pointed out, the farmers are relying upon the statement of the Prime Minister, that those prices are not to be less than they are at present.

11,495. Then my question comes to this, which you seem to shy at: Are the present prices as fixed, which the Prime Minister has promised shall not be less next year, sufficient to enable the farmers to pay the wages and the present outgoings for fertilisers, feeding stuffs, and other outgoings, and to make a profit in their business?—I would again like to point out to you that we have no present prices fixed for oats and barley, except under the Corn Production Act. If you are going back to that, that is totally inadequate.

11,496. But there is a minimum price fixed?—And a free market given to it.

11,497. So that you have a further benefit at present, that you have the minimum price fixed under the Defence of the Realm Act——?—Taking it on the whole, you are taking a fixed price at 68s. for barley, 75s. for wheat, and about 60s. for oats. I would say that those prices were not adequate at the present moment. The present prices we are making do not leave agriculture in a totally unremunerative position.

11,498. You mean because of the large price of barley and oats?—Yes; that is exactly what I wanted to bring out.

11,499. My question was with regard to the present prices as fixed under the Defence of the Realm Act?—Those for last year would be inadequate, in my opinion, to pay the present wages and the present hours; but we are getting a certain benefit from a free market at the present moment.

11,500. By that, you mean that barley is sold at 100s. a quarter?—From 90s. up to 100s. We do not know how long that will be. My experience of the barley market has been that it drops perhaps 5s. to-morrow. There is nothing drops quicker than barley.

11,501. I understand from your statement you take the view that competition from abroad will very soon begin again?—I think there is no doubt about it.

11,502. I am sure of it myself. I will just put the question again. I think I ought to have limited my question to the minimum prices as fixed under the Defence of the Realm Act, that they are not sufficient?—Yes, you were leaving out the factor of the free market.

11,503. I am asking you for next year now, what your view is as to what those prices ought to be?—I should certainly say minimum prices ought to be higher for next year, in view of our having decreasing hours worked by the labourers, which will mean increase of cost. Then again, you are having increases of rent taking place. That will come into operation on a good many farms next year. Then the rates will be a great deal higher next year; and there are many other factors to be taken into consideration. In my own country the rates have gone up something like 1s. 6d. in the £.

11,504. You see you have made a statement in answer to a Commissioner, that the wages were about 40 per cent. of your outgoings. Would 40 per cent. be the minimum?—No, that is with us an average. It will be less, or more, in different cases. Different circumstances will alter the facts undoubtedly.

11,505. Would the rent be about 66 per cent.?—I have cases of rent being raised 60 per cent.

11,506. I mean 66 per cent. of the cost?—No. I thought you were speaking of the rise of rent.

11,507. No, I was trying to get at the proportion of the cost?—That would all depend on the type of soil.

11,508. You have not worked that out at all?—No; I think if you put that question to Mr. Wyllie he will answer it. You will find it will vary in different cases.

11,509. We had better get from Mr. Wyllie any information with regard to costs?—Yes.

11,510. Has your Union considered any other way at all of meeting the present conditions except by a guarantee of wages?—No. There you are touching on policy, and we are reserving our policy. I really must say, my instructions are not to answer anything dealing with policy.

11,511. When are we likely to have the further views of the National Farmers' Union?—When you ask them. We are dealing with, first of all, costs, then results, then will come policy. We have confined ourselves to costs to-day.

11,512. *Mr. Duncan*: I would like to take you back to paragraph 7, the sentence Mr. Ashby asked you some questions about. You say: "At the present time farming is being carried out intensively." Do I take it your view is, that at the present time the last possible bushel of wheat, &c., is being produced from the farms?—As intensively as present circumstances will permit.

11,513. You do not qualify that statement in any way by the difference in skill or knowledge on the part of the farmer?—Undoubtedly you must take the skill and knowledge of the farmer. If you take manufacturing industries, you do not get two manufacturers with the same skill and knowledge. You find one factory carried on at great advantage, and another carried on perhaps at a loss. It does not alone apply to farmers.

11,514. So that when you say, as present circumstances will permit, you are allowing for defective knowledge of a portion of the farmers?—You must do that, and I think you must in all industries.

11,515. Do you think there is any possibility of improvement in that direction by better education and better training of the farmers?—I should not like to say that the farmers were so hopeless as not to be improved.

11,516. From your own experience, do you think there is a possibility of improving production in that direction without increasing cost?—There might be a little, not much.

11,517. You do not think there is much in it?—There is not much in it.

11,518. Do you think there is anything possible by an improvement in the class of labour?—What do you mean by that?

11,519. Is there any possibility of improving the output of your workers without necessarily increasing your costs beyond what they are now?—My own theory has always been that if you pay a man well and treat him well, you are going to get a better return from that man than if you underpay him and treat him badly.

11,520. So that in that direction it might be possible, without increasing the costs, to prevent the reduction of your output?—Not much, I think. I want to explain a moment. The farmer comes into direct contact with his labour, and he knows that labour. He is not in the position of a great manufacturer who does not see his labour. He is intimately acquainted with each labourer and he knows his capacity. It is a different thing with regard to a factory.

11,521. Have you any experience of the comparative output per man in the districts where higher wages have been paid, with those in the counties you are referring to now?—I have only farmed in Oxfordshire, and formerly I farmed in Lanarkshire, where of course we work longer hours and we pay bigger wages.

11,522. Was there any difference in the skill and capacity of the workers?—I can only argue from the Scotch versus the English side; and the Scotch workers, taken as a whole, are more educated men.

11,523. Take it in all directions. Is there not a possibility by better education of the worker of securing a better output without necessarily increasing the cost?—There is a possibility by raising his status; that is, if you raise his mind so that he will see it is not to the advantage of himself, his employers or others to slack for instance.

11,524. Does the same thing not hold good with an improvement in the education of the farmer?—I have already answered that, that I think the farmer is capable of improvement.

11,525. Do you think that the statement you make in the first sentence in paragraph 8 can stand without qualification? You say: "The remedy for low prices is the reduction of costs and the reduction of output"?—That is my considered opinion.

11,526. Is there any necessary connection between the reduction of costs and the reduction of output?—Yes. If you reduce costs, there is no doubt about it you are not going to get the same output.

11,527. You are prepared to make that an axiom?—I do not think you will get it without.

11,528. *Mr. Edwards*: As a farmer who has weathered the storm, you refer to here, this sentence you have just dealt with: "The remedy for low prices is the reduction of cost and the reduction of output," seems somewhat strange in my experience. You seem to base that really on this law of diminishing returns. I presume you will admit that in order that this law should become effective, you must assume other things remaining the same?—I do not quite gather the question. Will you please repeat it?

11,529. I presume you will agree with me that in this law of diminishing returns when you are referring to one matter, say manuring, or cost of labour, you must assume also that the other things remain the same?—Are you referring to prices?

11,530. No, I am speaking of output?—If you do not apply fertilisers it is a certain thing that you are not going to get so much return; but there is a time when the law of diminishing returns does apply, and you cannot get away from it.

11,531. Quite right; but take the question of potatoes, for instance. You remember very well about 1894 the variety "Up-to-Date" was introduced?—I am not a potato grower, but perhaps I will be able to answer your question.

11,532. But you remember that there is a potato called "Up-to-Date"?—Yes.

11,533. In my experience the introduction of that potato, assuming the same manuring and the same cost of labour and of everything else, doubled the crop straight away?—Was yours an exceptional experience?

11,534. No, it was the experience of practically every farmer?—That may be; I do not know. I should think that would depend on the varieties you had been using previously. There are some varieties of potatoes, I think you will admit, which are much less croppers than others?

11,535. Exactly; and this was a new factor coming into play. It was a new variety. I am speaking now of the years of depression which you have referred to. The same thing exactly occurred with oats in my district. I remember very well the variety "Abundance" being introduced. The mere introduction of a new factor in the shape of a new variety of oats called "Abundance" doubled the crop; and there were the same conditions of manuring, and things of that nature?—We certainly are indebted to our seedsmen. There is no doubt that they have done a very great work indeed for farming.

11,536. So those two instances appear to me to demonstrate the possibility of increasing the output, even when you are diminishing your cost of labour and manure? But you are selecting all the time, are not you? Would you say, for instance, now that the oat the "White Tartar" would give a bigger produce or a lesser produce than the "Abundance" per acre?—That, I think, depends on localities.

11,537. I cannot say about that; but with regard to how to meet a depression I am quite confident of this, that decreasing the output of my land was certainly not the way I weathered the storm that you have referred to?—You may have been exceptionally circumstanced. I am only speaking generally. I think you will find those are the views agriculture as a whole has taken, and I cannot take exceptional instances.

11,538. In paragraph 6 you mention that the basis of the statement is the assumption that farming "is not capable of adaptation to altered conditions." Personally, I have always held the view that the terms under which I hold my land, that is, under certain conditions in the agreement and so forth, interfere considerably with my power as a tenant of adapting myself to the altered conditions which I went through?—Yes; but there again you are touching on policy, and I must not go into that. That will come out later. I think you had better ask that question when the matter of policy comes up again. When you are touching on tenure, that is a matter of policy.

11,539. I should like to be quite clear what you mean by policy?—I am sure you know what is meant by policy.

11,540. No, I cannot make up my mind what you mean by it?—I say you are touching on policy now when you bring in the terms of tenure.

11,541. But surely when you ask us to fix the price of corn for a number of years, and you say you consider 8 or 10 years short, that is a matter of policy?—This statement here is not asking you to do that. We are putting this forward as an alternative. We say this is going to happen unless another thing occurs, a favourable agricultural policy. We are not making any threats at all; we are simply warning you.

11,542. Then I will leave it at that. At all events, you seem to agree, and you mentioned, that to fix prices for 8 or 10 years would be a short view. You said that, did you not?—Yes; that would be a short view, in my opinion.

11,543. I am a yearly tenant, and I will add a yearly tenant who at this very moment has notice to quit. What value would it be to me as a yearly tenant to have prices of this kind fixed, you might say, for 8 or 10 years, or 20 years? This is again touching on policy, and I am afraid I must not answer this question.

11,544. I will take your answer, but it is most unsatisfactory. I was going to ask you another question about the fixing of prices. You have already admitted that you expect the prices, taking the long view, to be fixed for a considerable number of years, and at the same time you say that landowners are already raising their rent 60 per cent. in some cases. How can you expect the nation to agree to a thing like that?—Are you asking me to give evidence for the landlord?

11,545. Yes?—If I were a landlord I should answer that question by telling you that the repairs and the outgoings of the farm have gone up very considerably. For instance, with regard to repairs, you might at least say it will take 200 per cent. more than in pre-war times to repair the steadings and homesteads. But I am not here to put forward the landlords' views at all. That is what I would say if I were a landlord.

11,546. Then will you answer me as a tenant?—I would answer the same as a tenant.

11,547. So that you agree with a fellow-countryman of yours, who the other day answered that the fixing of prices should be such that there was a guarantee of the wage for the worker, profit to the farmer, and rent to the landowners?—I would agree that all three must be considered. I have already stated it in answer to the first question asked me this morning.

11,548. May I get your opinion on another point? Does the Farmers' Union think that the present level of prices of agricultural produce must be kept up?—I do not know whether you mean the present prices of agricultural produce. Do you mean the free market—the present price of barley and other things? The question is so wide that I am in a difficulty.

11,549. Yes; the present level of prices we have been farming at, living practically on a high scale or level of prices.

11,550. *Chairman*: The question is whether you must maintain, for instance, 75s. for wheat?—Is it for next year?

11,551. *Mr. Edwards*: No, the long view; as long as you like?—That would depend on prices. If the price of farmers' corn drops, then you are going to have the cost of living go down, and with the cost of living, of course you would have the wheat go down. You see how it is intermixed,

11,552. But the point I was going to ask you was this. Are you aware that after a similar crisis to what we have now, attempts were made to maintain high prices for agricultural produce?—I am not aware of it. By what means?

11,553. By protection at that time?—No, I am not aware of it.

11,554. I may tell you that that is the fact, and that it miserably failed. Although you say you are not here to advocate a policy, still you agree that a scheme of fixing prices much higher than those of the Corn Production Act is essential for the well-being of the industry, especially of arable land?—The prices originally fixed by the Corn Production Act, yes.

11,555. I think you said that the farmers have no confidence. Do you think that the first step in fixing the prices in order to give the farmer confidence to cultivate his land in the best possible way is the fixing of a guaranteed minimum; or would you favour something else previous to that?—That, again is a matter of policy.

11,556. *Mr. Green*: I take it you wish us to outline a policy to give confidence to farmers?—If it is within your province.

11,557. You wish to dispel the heritage of fear of the 'eighties and the 'nineties?—If it can be done.

11,558. I think we are all anxious about it. Do you suggest to us that if we attempt to fix a guaranteed price approximate to the present we should get any more wheat sown this winter?—I really think that if you wish more wheat sown this winter, speaking quite disinterestedly now—I am giving you my opinion for what it is worth, and my private opinion—you should fix your wheat price at 80s. for next year.

11,559. *Chairman*: That is the minimum price?—Yes.

11,560. *Mr. Green*: Why I asked you was, because during 1917 and 1918, when wheat was 75s. and 80s. a quarter, a great number of farmers did not have sufficient confidence to sow wheat. I mean to say, we had 90,000 acres controlled by the State under

cultivation by the farmers?—Yes; you mean by Executive Committees?

11,561. Yes. It did not seem to me as if the guaranteed prices gave the farmers very much confidence?—I can speak as a member of an Executive Committee, that that was due largely to the season, if you remember. I can remember the season very well, and I can remember perfectly well what happened in my own county. We had a very wet time and a very dry time. When the land was broken up in order to put it into corn, the drought immediately following it was responsible for a great deal of that; and among that 90,000 acres, you will find it was not planted.

11,562. What I would suggest to you is, do you not think that a long view is really contained in Part IV. of the Act, rather than the guaranteed prices?—I have not the Act before me.

11,563. I mean the compulsory powers of Part IV.?—I am not going to enter into policy at all and say it should or should not be given; but I take it, if you are going to have a guarantee given, you must have those compulsory powers; and we, as progressive farmers, would not hesitate at all to say use them.

11,564. If the farmers withheld their sowing of wheat this winter, if they did not get the price they expected, would not that be a form of direct action?—You will find that the farmer, as a rule, would not to any extent. That is my personal opinion.

11,565. Do you seriously state that the Prime Minister made a distinct promise to the farmers?—I do.

11,566. Can you quote his words?—I have not got them here. I think everybody in the room knows that promise, or has seen it.

11,567. You do not think the farmers would withhold their hands from sowing if they did not get the guarantee they expect?—Not for this year, because they rely upon the promise. They look upon it as a promise.

11,568. You seem to imply that the farmers require more confidence; but no one put this question to you which was put to several other witnesses: Do not you think it is a sign of farmers having confidence in the future prosperity of farming, that they are buying up so many of their farms?—No; I should rather say that this is an emergency measure because they are being turned out, and would very often be left homeless. I do not think the farmer at the back of his head is thinking he is doing the right thing by buying his farm at the present moment.

11,569. I put it to you, if he has been making a good deal of money during war-time, which I think most farmers honestly admit, he may be in a position to retire?—I do not think many are in the position to retire unless they are large farmers. Small farmers certainly would not be.

11,570. You seem to be satisfied with the farming done in this country, as a rule. Are you aware that the Board has issued a statement saying there are two counties in England so badly farmed that they are unable to put any demobilised officers on any of the farms in those two counties?—That is a very serious state of matters and wants looking into.

11,571. Are you also aware that a large farmer, a Scotchman like yourself, has given evidence here that a great many English farmers could increase their output of wheat from 3 quarters to 6 quarters?—I cannot be aware of that, because I have not had an opportunity of looking at evidence.

11,572. *Mr. J. M. Henderson*: You say in paragraph 3 that the National Farmers' Union desires to submit evidence as to "the costs of production of the various foodstuffs usually grown in Great Britain." Then "(2)": "The financial results of farming, in which it proposes to submit profit and loss accounts and balance sheets of representative farmers." When do you propose to submit those?—They are coming. You will find about 200 statements.

11,573. Then "(3)": The policy to be pursued in the opinion of the Union, to develop agriculture in the future." Are you going to speak upon that at all?—That is the policy. I do not know who may be responsible for the policy of the Farmers' Union. It may be I or some other persons; but when that has come before us whoever comes will be liable to be cross-examined.

11,574. But you are here, and we do not want to bring you here again if we can help it. You say: "The Union has spared neither time nor money in endeavouring to ascertain"—watch these words—"and collect the views of its members so as to be in a position to place before the Commission the considered views of the farmers. Who is going to tell us the considered views of the farmers?—Whoever brings forward the policy. When the policy comes forward, you will have the considered views of farmers.

11,575. Then there is somebody else to speak on policy?—Someone else will come to speak on policy.

11,576. Who will that be?—I cannot tell you.

11,577. You are a farmer yourself, are you not?—Yes.

11,578. How many acres do you farm?—Just over 250 acres.

11,579. And what is the rent?—My rental at the present moment is, roughly speaking, £200.

11,580. Have you kept a balance sheet and trading account yourself?—Are not you asking with regard to results now?

11,581. I am speaking to you as a witness?—Yes, I have a balance sheet.

11,582. Are you prepared to produce it to the Commission?—That is the question discussed by the Committee. We are a Committee of four; and the Committee considered that the members of that Committee would have quite enough to do to look after the balance sheets of the others, and to procure every available possible knowledge we could for you here, and we would be in a better position to estimate the true views of those by not putting in ours.

11,583. You have not produced it?—Exactly. That was the considered opinion of the Committee.

11,584. Do you not think it is a very serious thing that you are coming here on behalf of a Union, having examined so many men, and you yourself an individual farmer having these figures will only tell us about one side of a question and will not tell us about the other?—That is a matter of opinion.

11,585. I have formed a very strong opinion on it. Then it comes to this, reading the whole of your *précis*, that you say in paragraph 9: "That which some men did in England during the depression, that which men have always done in the new countries, can be done by men generally in this country, if the market drives them to it" and so on. As I read it, but perhaps you will correct me if I have taken a wrong impression, the gist of it is this: "We are going to lay certain figures before you and will tell you what our programme is, but, after all, it is not for us. We can do well under any circumstances; but it is for you, the Government, to say whether you are going to subsidise or protect us by guarantees and so forth. It is really your business to put it"?—You have put it very admirably. We say that we can carry on; but we do not say it is going to be in the national interests, and we do not say it is going to be as the Nation requires.

11,586-87. The national interests must be considered by Parliament?—Yes.

11,588. But your view is: "We do not care what we do; we can get along very well without you; but it is your business to grow men," and all that. Touching the production of A1 men, no doubt a country life is very pleasant and very healthy; but have you seen the medical reports as to school children in the country?—No, I have not.

11,589. I would advise you to look at them, and then you will not be so very sure that it is not to the interest of the nation to send these children to the towns?—I gather that is a debatable point. That again is a matter of opinion.

11,590. When the 86,000 farmers talk about fructifying the towns from the country, they should look at the Medical Officers' reports of school children in rural districts with regard to intensive cultivation. Have you ever been in Denmark?—No, I have never been there.

11,591. Have you ever read accounts from Denmark?—I have.

11,592. How many quarters to the acre can they produce?—I do not know; but Denmark is not quite circumstanced as we are, is it?

11,593. The ground is not any better; but I am asking you about the production. You do not know?—I do not know. I do not think it is quite fair to compare Denmark with England.

11,594. As you do not know, I do not see how you can make that comment. You say that the war prices will drop. You are pretty confident of that, are you not?—I think everyone should be.

11,595. What are your grounds for that?—I have already stated them.

11,596. I want to put it a little further. Are you aware that an enormous quantity of the land of America which produced freely, now requires fertilisers to make it produce anything like a payable quantity?—Quite.

11,597. So that that is a part of competition which goes away?—Yes, but we have others coming in, as I have already pointed out.

11,598. Are you aware of this, that a great many of the countries in the East which were rice-eating countries have, in the last recent years, become wheat-eating countries?—I am also aware of that.

11,599. That is a fact on the other side. If you have prices coming down of wheat and so forth owing to this competition, you have, on the other hand, the fact that fertilisers will come down?—On the other hand if you are assured that prices are not going down, then it is quite easy to give us the guarantee. The guarantee will involve nothing if you are quite sure prices are not going down.

11,600. That was what took place last year, was it not?—I think so. I do not think the guarantee will be operative this year.

11,601. Then why do you ask for it?—Because it is something to go upon—because you have not got that decrease in prices yet. That is my answer.

11,062. Do you not see that if you give a guarantee where no guarantee is ever required, when the time comes later on it will be the foundation for pure protection?—But we, as practical men, think the time is coming when if you insist on a certain mode of cultivation, a guarantee will be required.

11,603. That is your view?—That is my view.

11,604. Not this year perhaps, or next?—I have already said about the long view.

11,605. How long—for 10 years?—I should say 8 or 10 years for the short view.

11,606. Has your Union formed any idea of what that means with the prices perhaps breaking to 60s. with a guarantee of 70s. Have you any idea what it is going to cost the Nation?—I have no idea what the guarantee may be at all, and I do not know what the prices may be fixed at; but, according to you, as the prices are fixed, so should the prices of labour be.

11,607. Never mind labour for the moment. What I am trying to get at is your view and the view of your Union, because what you are proposing is a very serious matter. You stated just now to Mr. Cautley that the Prime Minister gave you what you considered a promise, and I understand that is 75s., or something like it, is it not?—Yes.

11,608. Supposing they continue that with your long view of 10 years, and the open market drops to 60s., and the Government or the nation have to pay you 15s. per quarter for every quarter of wheat, have you any notion of what that tax would amount to?—That is a matter of policy again.

11,609. It is a matter of fact and figures?—No; that will be spoken to when the matter of policy is brought before you.

11,610. *Mr. Thomas Henderson*: Did I understand you to say that your labour cost was about 40 per cent. of the total expenditure?—Yes, that is what we take the average to be.

11,611. Is that based on your own costing figures?—As near as may be. I have a small typical farm.

11,612. Here are some figures submitted by the Costings Committee showing a total expenditure of £310,853. The labour cost of that was £127,849, rather less than a quarter, 24·6 per cent.?—I think if you will address that question to Mr. Wyllie he will be able to enlighten you on the matter.

11,613. You are only basing it on your own particular farm?—Yes, my own idea.

11,614. In the last sentence of paragraph 11 you say "The nation would lose heavily in output at a time when home production is the thing most needed for national rehabilitation." What, exactly, is in your mind when you make that statement?—That is with regard to premising that we have a healthier population in the country, which seems to be debated here, than there is in the towns.

11,615. Then your next Clause is simply the amplification of that. I thought there was an antithesis in your mind here?—I do not think so.

11,616. You are simply referring to production of men?—Yes, I think that is what is meant there.

11,617. And nothing else?—No.

11,618. In paragraph 8 you refer to certain successful farmers who, by improved methods of various kinds, were able, by taking a small acreage profit, to farm successfully. Have you any figures relative to the output during the depression?—No, I have no figures.

11,619. It is simply a personal opinion?—It is simply a personal opinion.

11,620. *Mr. Prosser Jones*: You are representing 80,000 members?—Yes.

11,621. What proportion would that number be of the farmers in England and Wales?—I do not think it would be more than a third. Roughly speaking, it would be about a third.

11,622. And any benefit that accrues to the third would also accrue to the two-thirds?—Yes, I should hope so.

11,623. And, in a sense, you are speaking for those who are outside the Union?—As well. I am speaking for the whole of the Agriculture of England.

11,624. How do you justify your application for a guarantee, in view of other industries, that are hardly paying their way at the present time and have had to carry on?—I think the whole body of this is against that idea. We say we can carry on without a guarantee; but we say we cannot do it as the Government wish us to do it perhaps. The whole body of this goes on to say that we can carry on without a guarantee if you leave us to our own devices; but if you wish us to farm in a certain way and you decide it is in the national interest to do so, then we should ask for a guarantee, or something in the nature of that.

11,625. You will agree with me that there are other industries quite as risky as agriculture?—I cannot speak for other industries. I must only speak for my own.

11,626. But what I wanted to find out was, what reasons you had as an industry for asking for preferential treatment?—Because we say we have been interfered with. We are being interfered with now. We are being asked to do a certain thing which, if left to our own devices, we would not do.

11,626A. I will put it in this way. If you had your choice for the coming year, to be left alone and do as you liked on your farms, or to have a guarantee, what would be your policy in that case?—For next year alone?

11,627. For any year?—Personally, as a farmer, I would be inclined to take the risk for next year alone. I am not speaking for the Union now; but you ask me for my opinion, and I will give you my opinion. Give me a free hand.

11,628. You have not had the opinion of your Union, I take it?—I am speaking personally.

11,629. Is there any likelihood of your being able to retain the services of men on the farms while the wages in other industries are considerably higher?—That is what I want to see. I want to see us able to put our labourers on the same basis as the men employed in the towns would require. That is exactly what I want to see.

11,630. You could not tell us how this 40 per cent expended on labour compared with the amount expended on labour in other districts?—No. Perhaps if you address that question to Mr. Wyllie he will be able to inform you.

11,631. *Mr. Langford*: A great many questions has been put to you as to the representative character of your evidence. You say that you represent the National Farmers' Union, which is composed of between 80,000 and 100,000 members, and I take it that you have come here to-day to introduce Mr. Wyllie?—That is so.

11,632. You have come to-day at the request of the Commission, and Mr. Wyllie is to follow you to speak only to the cost of production?—That is so.

11,633. You have been rather pressed by some members of the Commission as to why you are not putting forward to-day your own individual balance sheet. I take it, at the right moment the Union that you represent will be prepared through someone to submit individual balance sheets?—That is so.

11,634. So that if you had been asked by the Commission to bring balance sheets to-day, you could have done so?—Undoubtedly; but they are coming, with the results.

11,635. Mr. Wyllie is going to speak to that volume of evidence?—That is so.

11,636. Which, at any rate, is conclusive proof that the Union is seeking to help this Commission with regard to the costs of production?—I have already said so

11,637. You have been somewhat pressed by some Members to give your opinion as to what the price should be for next year; and I think it is rather regrettable that you regard it as a question of policy, because it is important that the National Farmers' Union should give some guidance to this Commission with regard to what the price for next year ought to be.

11,638. *Chairman*: I think he said 80s.?—Yes; 80s. for wheat.

11,639. *Mr. Langford*: Then it is your opinion that the farmers' case would be met by 80s. per quarter for wheat?—That is so.

11,640. Did you also state what in your opinion would be a fair price for barley for next year?—Before I say anything with regard to that, I want to know whether we are to have a free market or not? I should say, taking it generally, 74s. to 75s., or perhaps 73s. to 74s. would be a fair price for barley next year.

11,641. You are speaking of minimum prices?—I am speaking of minimum prices.

11,642. And the Union would like a free market beyond that price?—Exactly.

11,643. You have been questioned with regard to 10 years being a short or long view; but, in your opinion, is 10 years a short view with regard to agriculture?—That is so.

11,644. And if agriculture is to be put on a permanently safe basis, the principle of guarantees will have to be for a term of years, not less than 8 to 10? That is so.

11,645. You have been asked a question as to whether you have taken into consideration that if a guarantee of 80s. is given, what the cost of that would be to the nation. I take it, when you mentioned a guarantee of 80s., that was only applicable to next year's price?—Yes.

11,646. May I take it your view is, that that guaranteed price would necessarily rise or fall contingently with the cost of production of the crop?—Yes, for later years.

11,647. Then it is the principle only that you want to be embodied, say, for 8 or 10 years?—That is so.

11,648. You have been asked several questions with regard to improved methods of farming. I take it it is your view, as it is also the view of the National Farmers' Union, that much may be done in that direction to assist agriculture?—I have no doubt of it.

11,649. You would not be so silly as to suggest that agricultural education had reached such a point that it could not be improved?—I have not said so.

11,650. In other words, you think that the industry might be helped considerably by giving better technical education both to farm labourers and to farmers?—I am sure of it.

11,651. It is within your knowledge that to-day the farm labourer is not so skilled as he was some years ago, at all events, as to the general run. Let me put it in another way. Is it not more difficult to get a man who is skilled in the art of hedging or thatching than it was?—Yes, I quite agree with you. On the other hand he has improved in skill with regard to machinery perhaps.

11,652. In consequence of the greater use of machinery on farms?—I quite agree.

11,653. And the farmers knowledge with regard to the value of artificial manures and feeding stuffs is somewhat limited?—Yes; but that is being improved upon.

11,654. Those can be improved upon?—Yes.

11,655. There are other things which surround our great industry which need careful looking into and revision, such as the conditions under which the tenant farmer holds his farm?—Yes; but I think I must again say that that should come up on the question of policy.

11,656. Quite; but let me have your personal opinion only, if you do not care to commit the Union to it, because it is important that we should get from you, the first witness, that there are other things in your mind and will be in your mind in framing the policy which will considerably assist the industry permanently?—Would it not be as well to leave this whole question until our policy has developed? I am quite prepared to give the Commission my opinion on land tenure; but, on the whole, my own opinion, though I bow to the ruling of the Chairman, on it is that this is a matter of policy.

11,657. *Chairman*: You are here to give evidence on behalf of the National Farmers' Union. Your own opinion on one thing or another is useful in itself; but it is not evidence of the opinion of the National Farmers' Union?—Well; I think security of tenure is a very great necessity at the present moment.

11,658. *Mr. Langford*: With regard to the minimum wage, I put it to you that it is the opinion of the majority of your members that the minimum wage has come to stay and ought to stay?—We do not want to go back to the old wages and the old system at all. I do not think for a moment we do. We want to see better wages for our labourers. As I said before, if there is any prosperity in agriculture, we want them to take part in it.

11,659. And you want to obtain such prices for your commodities as will admit of some profit to the farmer, and will admit of the farmer paying an adequate wage to the farm labourer. Is that your view?—That is so.

11,660. You said just now, in answer to a question, that the farmers would be perfectly willing to be left alone; that is to say, they would be prepared to conduct their business in their own way?—Exactly.

11,661. But I think you also said that if the nation required the farmer to farm in a particular way to keep the land under the plough that had been broken up during the war, then the farmer would very rightly ask the Government to see to it that after producing the crops the Government need and the nation asks for, they shall be produced at a profit?—That is so.

11,662. I think you have already said that the Prime Minister made certain statements and pledges with regard to the future of agriculture?—We take it so.

11,663. But you know it is a fact; they appeared in the Press?—Certainly. We look upon them as promises and as pledges.

16,664. And in the House of Commons he has 154 members who are pledged to assist him to carry out the national pledge?—Yes, I think so.

11,665. When the time arrives, will the National Farmers' Union through the persons they authorise, whether you or someone else, be quite prepared to put forward their views with regard to the national policy and their own individual farmers' policy as to the future of agriculture?—Yes.

11,666. *Mr. Lennard*: I understand from your *précis* that you and the National Farmers' Union consider that we ought to deal with the problems that have been put before us with a single-minded view to the interests of the nation as a whole, and not limit our outlook to the interests of the farmer and the agricultural classes?—With regard to the interests of the nation as a whole, I think they should have pre-eminence; but I think you must take into

consideration those who are employed in agriculture, and by employment I mean the farmer and the labourer.

11,667. As part of the nation?—Yes, as part of the nation.

11,668. I want to ask your opinion about a national problem which seems to me of some importance. Is there in your opinion any danger that if we encourage corn production we may discourage milk production? A representative of the Ministry of Food told us the other day that they were not troubled about corn since they could get it from abroad, but that they were anxious about the national milk supplies since we are practically dependent for our milk upon that which is produced at home?—I do not think so. Your arable land will produce more milk. An acre of arable land will produce more milk than an acre of pasture. That would not enter into my mind.

11,669. Do you think there is sufficient experience in the agricultural community of arable milk production?—Not at the present moment; but that would come very rapidly; it is coming now.

11,670. But might not high prices for cereals prevent that use of the arable land?—The only way I can think of milk production falling below the requirement of the nation would be a price being given for milk which is too low.

11,671. But if the prices for cereals were so high and milk prices were relatively low?—Yes; but I do not think that is ever likely to occur. You have the whole of the world producing cereals, but you have only our limited part here producing milk. Milk will always maintain the standard. I think that whatever milk is required you will find it in the British Isles. I should not be at all afraid of that matter.

11,672. Then, if I may go a little further into a question that Sir William Ashley asked you, in paragraph 12 of your *précis* you say: "It can only be a question of time before war markets break." You do not mean by that, do you, that you really expect the price of corn to come down to anything approaching the pre-war level?—Not at present. I think my answer is the answer I gave to another question with regard to what would be my attitude as to next year. If everything were left free I should be inclined to accept it; but undoubtedly the trend of prices would be downward. I am speaking personally now.

11,673. Do you think there is any likelihood of the prices of cereals coming down to anything like the figure obtainable before the war?—I do.

11,674. Not within any period which it would be possible for this Commission to recommend as the period during which there should be a guarantee?—In considering a question of this description you have to take a very broad outlook; and I think the outlook you require would be almost too broad for me to go into, because you have so many countries involved in this with regard to production. Then you have other matters, such as labour and ships. I do not think I should be prepared to go into the question as broad-mindedly as you would ask me to do.

11,675. I am anxious to find out how far the various factors which affect the question had been considered by you, and your Committee, when this statement about the future prices was made?—I have heard the opinion expressed that within five years, in all probability we might come back to pre-war prices. On the other hand, I have had men who stated that it cannot take place in that time. We have had a statement made by an eminent statistician a little while ago, that there was a very large amount of wheat being held back; and where that has gone I do not know. It was quoted in the papers. It was said that it would come back on the market and be dumped. We do not know where that wheat has gone, or whether it is in existence or not; but those are factors which bar the farmer from giving you an expert opinion with regard to the matter.

11,676. Your Union is really rather deterred by the uncertainties of the position, than confident that the prices will come down?—That is so. We are deterred by the uncertainty.

11,677. You are aware, I suppose, that most of what were the virgin soils of the new world are virgin no longer?—Yes; but I know there are others coming in.

11,678. Is not it within your knowledge that supplies of foreign corn from these other countries of which you speak as coming in have now to be sought further afield, for example, in Australia?—That may be.

11,679. That means, does it not, a longer and more costly voyage?—On the other hand, I think you are going to get supplies nearer home. Take, for instance, Mesopotamia and the development of Syria. You have to take a broad outlook when you begin on this.

11,680. But at present it looks as if we were forced to seek our supplies at a great distance, and that means a greater cost, does not it?—I think I have stated already that there are possibilities, but I do not think for a moment that Russia, for instance, has come up to her limit of production.

11,681. But are not you aware that before the war Germany was taking for her own needs a very large and increasing proportion of the Russian supply?—Yes; and that was being met by the Russian supply, but it did not show much diminution of the Russian supply here.

11,682. Would you agree with me that besides the length of the voyage there are other factors which look as if they were going to keep up the price of imported commodities, such as, for instance, the rate of exchange, increased wages of shipbuilders, seamen, and dock labourers, and the rise in the price of coal, which not only increases the cost of building ships but also increases the cost of running them, because it means that the price of bunker is higher?—But you are pre-supposing in that question that the present prices for all those things are going to remain. I say, in my opinion, they are not going to remain. With regard to the rate of exchange, there you have the most uncertain factor in the world. It is a strong point in the farmer's case to raise more stuff here with regard to the rate of exchange, because on every quarter of wheat you buy in America the rate of exchange stands to-day at 17s. 2d. against £1. It is a very strong feature for the farmer's production of more stuff.

11,683. Yes. But apart from the rate of exchange, you say that in agriculture war costs are likely in a large measure to be permanent?—Yes.

11,684. Surely that will apply also in great measure to shipbuilding and the cost of running ships?—No. What was in our minds when we put forward those ideas, I think, was this: we did not want, and we hoped that labour would never come back to the low level of pre-war prices.

11,685. But are you not also aware that there has been a rise in wages in other industries besides agriculture?—Yes, I am quite cognisant of that.

11,686. And yet you think their costs of production are likely to come down and their wages likely to diminish?—Yes; because I say previous to the war and at the commencement of the war, we were not paying wages commensurate with what men would have made in the town. That is my personal opinion, and I have stated it again and again here.

11,687. But why do you think that wages in other industries, as for instance, shipbuilding, and the wages of dock labourers, are more likely to fall in the near future than the wages of agricultural labourers?—Because I take it that they had a fair wage before, which agriculture had not. I really cannot argue for other industries. I can only speak for my own.

11,688. I was only trying to find out how far you had considered these various factors before you made this statement?—You see how I have considered them.

11,689. With regard to the general question of policy, you agreed, I think, that the question must be answered with reference to the interests of the nation as a whole, and not with any view to profit to any particular class?—Yes.

11,690. Would you agree with me that the interests of the nation in the present economic situation require that everything possible should be done to increase the national wealth?—Yes; and by doing this, I think you will be helping to increase the national wealth, because one of the problems, as I have pointed out, will be solved, that we would grow more ourselves

and require to buy less from other countries where the rate of exchange was against us. You would be helping in that way.

11,691. Broadly speaking, the national wealth is increased, is it not, by devoting our labour and capital to those undertakings which pay best?—I do not know that I could quite follow that. I do not know that I would agree.

11,692. It seems to me rather obvious?—No. You are getting certain advantages, I maintain, from helping agriculture.

11,693. You will agree with me, at all events, that we shall have to consider, as we are looking after the national interests, whether it will really pay us best to increase the labour and capital devoted to agriculture, or, on the other hand, give more attention to shipbuilding, mining, engineering, and so on?—I quite agree to that.

11,694. And if an industry cannot pay its way without a subsidy from the taxpayers it cannot be said to be very profitable to the nation to put labour and capital into it?—That is for the Cabinet or for the nation, if you like, or for Parliament to decide. If they want a certain thing from agriculture, there it is; but if you leave us to our own devices, the whole of the statement shows that we are not coming to you as suppliants at all. Leave us to our own devices, and we are not suppliants.

11,695. But you would agree with me that if prices greatly in excess of world prices are guaranteed for home cereals, one of the consequences—because I understand you are simply putting before us alternative consequences and not recommending policies—of fixing guaranteed prices would be to impose a great additional burden upon the taxpayer?—I think that follows; but in return I have told you already that you would be getting something, at any rate, by the rate of exchange going in your favour.

11,696. But I thought just now you said that the rate of exchange was likely to alter in our favour in any case?—No, I did not say so. That is not my opinion at all.

11,697. But if the rate of exchange is not likely to alter in our favour in any case, then I argue that the rate of exchange is a factor which, apart from any guarantees , will tend to keep up the price of imports?—I quite agree, to the amount that that exchange affects the price.

11,698. Take an instance: Suppose we were to get back our wheat, say, to the position of 1874?—That is something just under four million acres.

11,699. We were then growing, roughly, 3,600,000 acres. You mentioned just now a guarantee of 80s.?—For this next year's crop.

11,700. If the guarantee were 70s. a quarter on the same basis as the Corn Production Act, and the world price went down not to pre-war figures, but merely to 60s. and stopped there, the guarantee for wheat alone would then involve an annual burden on the taxpayer of £7,200,000?—Again I say, when this matter is argued out it will come on policy.

11,701. I do not want you to think that I am hostile to any policy of guarantees; but I would like to know whether the Union which you represent have considered that the question may be regarded from two points of view; or, rather, that there is a difference in kind between a protective guaarantee and a guarantee which is in the nature of an insurance. May I explain what I mean?—I think I have got what you mean.

11,702. Whether you have fixed your guarantee at a price which will make any enterprises in agriculture which would otherwise be unprofitable artificially profitable, or whether you simply fix your figure at a price which is likely to be below the world's prices, but will prevent the farmer from being deterred by any uncertainty which is not really justified by the facts?—But by farming up to it you will find the law of diminishing returns comes in at once. You cannot get away from the law of diminishing returns, try how you will. It has been tried for the last 40 years, and we know from sad experience.

11,703. I do not think you quite follow me. I am only asking you whether you have appreciated the fact that there are two sorts of guarantees—one which is protective and the other an insurance?—Yes, assurance to be an assurance could not be, I take it, below the prices of foreign commodities which were imported; otherwise, it would be no insurance, to my mind.

11,704. Surely it would be an insurance against prices coming down in a particular year; it would make the farmer feel secure of that minimum?—I do not know on what basis you are going to fix your insurance. If you would tell me that, then I could give you an answer.

11,705. I am just suggesting this to you, that supposing you are deciding that a certain figure would for a certain number of years be fairly safe from the point of view of the taxpayer, and would not be likely to call upon the taxpayer for a large sum of money except in a particular year when there was an extra supply from abroad, might not that encourage the farmer to some extent? Might it not save him from his own uncertainty, so far as world prices are concerned, and give him the benefit of expert opinion about world prices?—So long as the farmer was assured in his own mind that he had a certain price guaranteed to him that he could furnish that product at, you could depend upon the farmer producing it.

11,706. He would farm up to the level of that price?—He would farm up to the level of that price.

11,707. To turn to another point, I understand you think that the physique of countrymen is better than that of townsmen?—That is my impression, and the impression of countrymen anyhow.

11,708. Therefore, the encouragement of agriculture would tend to improve the physique of the nation?—That is our impression. It has been called into question to-day, and I am not in a position to prove or to disapprove it.

11,709. But have you not heard farmers say they cannot afford to pay as good wages as employers in towns, because farm labourers are such crocks?—Simply because the crocks that were left to us were all that were left to us, because the good men will go to the towns. We could not afford to keep those men. That is exactly what I want to do: to keep the good men with us and remain with us, and so raise the standard.

11,710. In answer to Mr. Cautley you agreed, I think, that agricultural wages were driven down to a very low level in the bad period of the nineties. Is not it within your knowledge that agricultural wages were lower in what are sometimes called "the good old days" before 1874, than they were in the subsequent period of depression?—I think it would be absolutely futile to go back to the "good old days," because they are washed away entirely; they have left no impression on the present day farmer at all.

11,711. But is it not a matter of fact that the wages were actually lower then?—I have heard so. I did not farm in England in those times, and I can only speak of what I know myself; but I do say that the impression which was gained of getting labour at 8s. or 9s. a week is a thing of the past and obsolete. I think it is absolutely futile.

11,712. I was only wanting to get at the question of wages being driven down?—I think it is quite futile to go back 40 years ago.

11,713. You are aware that the prices of food and other necessaries that a labourer had to buy, were lower in the former period of depression?—I am quite aware of that; but even then he was not well-fed.

11,714. In answer to Mr. Green you said that you did not think the fact that farmers were buying their land was any evidence of confidence in the future, but that they only bought their farms as the alternative to being turned out?—Yes, that is so in a great many cases.

11,715. Is not it the fact that in many cases these farmers have paid high prices for their farms?—Yes; that is a question of emergency, again. I said it was an emergency, and it is still, because they pay prices which they know are too high.

11,716. Why do they pay them?—I have told you: to keep a roof over their heads and preserve their interests.

11,717. But does not that mean that they were obliged to pay these high prices, because if they did not pay them, someone else would?—Not always; and the man who very often has been running it up has been the land speculator or, in other words, the land grabber, to my own personal knowledge. He is the man who really and truly had no interest in the land whatever, but simply thought he could sell it to another farmer who might be in the same predicament another day. That is how these prices have become inflated.

11,718. You do not suggest that these land speculators did not know their own business?—No; they were taking advantage of the market, because there were so many farmers being displaced. They knew that the demand for land was great because the farmers had been displaced.

11,719. By someone else?—By someone else.

11,720. Therefore, on the whole, there was a large number of persons who had sufficient confidence in the future of farming to pay high prices for land?—I have not said so. That is exactly what I have not said, and you must not put that into my mouth. I said it was an emergency scheme.

11,721. Yes; but I fail to see how this emergency scheme arises unless there was a large number of persons anxious to get hold of the land?—Because a number have been displaced; and if you get two bidders for the same thing, you know what happens.

11,722. Yes; but the displacement of these farmers means that some have already taken their place and therefore the total number seeking the land is not larger, I think?—I am not going to argue the point.

11,723. *Mr. Nicholls*: I only want to ask you whether I am right in thinking that the members of your Union when they agreed to your coming here, really thought that we ought to have the evidence from the Union in mild doses, and that yours should be the first one?—No, not at all; nothing of that sort entered their heads.

11,724. Surely you talked this matter over and came to a definite agreement that at any rate you were not to interfere with policy?—Exactly; nor results.

11,725. But was it suggested that the policy would be a stronger dose? I am a bit puzzled about this? —When we have an indication of what the Government require from us, then we shall be able to frame our policy.

11,726. There was a definite understanding that you should come one, two, three; and that you yourself should be a kind of introduction?—What we understood the Commission to require from us was first costs; and we were hurried in the preparation of those costs, I may tell you.

11,727. Here is a statement, and in this statement I notice reference is made to matters which I would have taken to be matters of policy. The practice of co-operation is one, and factory farming is another? —We only say that that may be an alternative.

11,728. To an ordinary man like myself, that is introducing very strong policy. You have also got Small Holdings in it?—No. I think you will find that when our policy comes out, it will be something very different from this.

11,729. Are you the Chairman of the Small Holdings Committee of the Oxfordshire County Council? —I am.

11,730. Did not you say a little while ago that during the last 12 months much land had been put under grass—that it is reverting back again to grass? —I did not say much. There was a very small proportion read out to me, and I said take that as an indication. It is not much. It is about 90,000 acres, I believe, which is not much for England. We were speaking of England, and not the County of Oxfordshire.

11,731. It strikes one as an ordinary man that it is getting on in that direction?—Yes; but you have to deal with millions of acres in the whole.

11,732. Do you know of any farms in Oxfordshire that have been laid down to grass?—I know one or two now that are derelict, that have come under my own observation. We had to change the tenants.

11,733. But they did not change them to grass?—I do not know what the succeeding tenants may do; they had gone into grass.

11,734. Your Committee really is keen to keep them cultivated; that is the real object?—We are doing everything we can to get that done.

11,735. And really this land which has gone down to grass has been on the farms of large farmers?— What we do find amongst the small holders is a great desire for a proportion of grass. Among something like 200 applications, what we have found is that there is a very big desire to have a small proportion in grass, and we are trying to satisfy them to the best of our ability, but cannot do so in all cases.

11,736. But is not it a general experience that when you get small holders, they really want common ground into which they can turn their stock, and not part of their holding laid down?—No, I do not find that in Oxforshire.

11,737. I am not sure whether I understood you rightly, but I thought you said that some of this land had been—you did not use the word, but it is a common word of mine—really overstrained during the war?—Yes, I quite follow you.

11,738. And that it wanted rest; and that the way to rest it was to put it down to grass?—I did not say so. The way to rest it and to bring it into proper cultivation, speaking as a practical farmer, would be to give it a year's fallow.

11,739. That is what I should have judged; but I assumed what you said was, that we had been really over-doing the land during the war period, and getting more out of it than was being put in?—Yes, that is quite true.

11,740. And that really some of this land had dropped back through that cause, and that all the land that was resting was not fallow, but had gone back to grass, and that was really one of the causes of it going back to grass; and that it was not the fear that farmers could not live out of wheat growing that had drifted it back again to grass?—Would you tell me as plainly as you can what you are driving at?

11,741. That is what I am driving at. It seemed to me from what you said, that this land was overdrawn and wanting resting?—Yes; in other words it had been cropped too severely.

11,742. Some of that land had gone back to grass, and it really was resting while it was in grass?—I did not say so.

11,743. But what was the assumption?—The assumption is that you can fallow, that is, keep that land still arable. As a practical man I tell you the proper course to take with land, when it has been, as you put it, overstrained, is, when the time permits of it, to give it a year's summer fallow, and keep cultivating it and eradicating the weeds, and you will be restoring the fertility of the soil again.

11,744. I have done a great deal of it and that was my view; but I gathered from your answer earlier on that it was not your view?—I have given no other view I can assure you.

11,745. But you do not assume that all the land that wanted rest was under fallow?—No; you take it bit by bit.

11,746. And some of it has gone back to grass to have a rest?—If you have an analysis made of that statement, you will find how much of it had gone back to clover. Clover would only be for one year; then you might have had two years' grasses. You would want to analyse it very carefully in order to have the true answer to your question.

11,747. There was one other point with regard to that which is really an industrial point. I think earlier on you gave a case where the number of A 1 men among the rural population was a greater proportion than from the towns. I want to know whether you could tell us during what period of the war that was?—I think that was about the third year of the war.

11,748. That is what I was thinking; because, knowing as I do a good deal about the rural area, the first call was on the industrial workers and very largely the best A 1 men went first. Then came

this third year of the war call which brought in a lot of men who would not have been in otherwise, and that meant that the men in the rural districts had been left till the last, and you did then get a larger proportion of A 1 men in proportion to the other?—Yes; but a very large proportion went the first year of the war. A very large proportion of my own men went.

11,749. Yes; but there was a very large proportion of men held back for agricultural purposes which you could not hold back in regard to other industries?—They were not all A 1 men.

11,750. But that is a fact?—Yes.

11,751. I do not know whether I understood you aright as saying that you came here to look after the interests of the farmers?—As a whole, yes.

11,752. When you gave that answer, what seemed to strike me was that being here in their interests, they told you you were not to say whether the guarantee was to be 3, 5, 10 years, or whatever it was to be. If anybody asked you about the guarantee, you were not to say?—No, I was not told that. I think I can tell you this, that I have said that my own opinion of the short view is 8 to 10 years. That stands recorded.

11,753. I was now getting back to where we started out, that you had instructions when you came here as to how far you were to go?—I had instructions not to speak on policy, I quite agree to that.

11,754. *Mr. Parker*: I have read your statement very carefully; and I gather that the difficulty of assessing the probable course of the market is what is interesting at the present time the 80,000 members of your Farmers' Union?—Yes; I think I can agree to that.

11,755. I suppose, having regard to the present position of the world, they are not afraid of any immediate break in prices, I mean within the next couple of years?—I should not say a couple of years; but for next year I should say we would not be afraid.

11,756. Is the market you have in mind the market for cereals and meat which is controlled by world prices, or has the word "market" a wider application in your mind, covering the cost of labour in the future and the cost of farming requisites, such as seeds, feeding stuffs, and manures?—There are certain requisites in regard to farming which we expect will go down; but I must reiterate this point again, that we do not expect labour to go down to pre-war conditions. We do think and we do say it is possible, nay, more than probable, that, by-and-bye, the price of products will go down to pre-war prices. That is the fear that animates the farmer at the present time.

11,757. Then there are three things—the fall in the price of cereals owing to world prices, the continuance of the present labour cost or a possible rise, and the chance of farm requisites not falling in price correspondingly with the value of cereals and meat: that is the fear?—Yes, that is the fear.

11,758. In the last paragraph of your statement you say: "On the other hand, it may be that production and employment in the future depend upon guaranteeing to the farmers certain prices, on the principle of the Corn Production Act, for certain periods, and the actual figures being subject to revision, from time to time, in the light of changing circumstances." You have told us you are not here to speak with regard to the policy of the guarantee. Will that prevent your answering me one or two questions as to if that policy were adopted, what the nature of that guarantee should be?—Yes, I am afraid it would, because we do not know what the Government are requiring of us. When the Government tells us what they require with regard to cultivation, we shall then be able to frame our policy; and I am afraid that would eliminate my answering the question.

11,759. I do not think you quite understand what I mean. Could you answer me the question whether you think it should be a guarantee of fixed prices for a long or short period, or prices, as you seem to contemplate, on a sliding scale?—They will come within the four corners of our policy.

11,760. You cannot answer those questions to-day?—No. Any answer I might give you might prejudice that policy when brought forward.

11,761. I wanted to elicit your opinion on these two points; but you cannot give it?—No.

11,762. If that is so, I have only one other question to ask you. You say the National Farmers' Union feel that this question of the economic future of agriculture is a matter more for political concern than industrial concern, and you give one or two reasons. Besides the reasons you have given, is there not the further reason that it is important to produce as much as possible in this country so as to reduce our imports as compared with our exports?—I quite agree.

11,763. I think you rather touched on that before?—Yes, I quite agree to that.

11,764. That is a very strong reason?—It is a strong reason.

11,765. *Mr. Robbins*: The Farmers' Union, whom you are representing here to-day, seems to have come in for a good deal of criticism concerning the method it has adopted in presenting its evidence. Is it a fact that the Farmers' Union is conforming strictly to the lines laid down by this Commission?—That is so. Nothing struck me more than the idea that we were not conforming to the lines laid down by the Commission. We were asked within a certain time for the costs, and we produced them.

11,766. You were asked by this Commission first of all, to concentrate on costs?—Yes.

11,767. And then to supply balance sheets?—Yes.

11,768. And you were told, although you were not encouraged to do so, that there might be an opportunity of saying something about policy at the end; but you were distinctly discouraged from saying anything about policy at the start?—That is so.

11,769. So that the Farmers' Union has been getting into great disrepute to-day for doing what it has been asked to do?—Exactly.

11,770. Your statement to-day is simply in the nature of an introductory statement?—Yes, as to the costs.

11,771. With the intention of removing a wrong impression the public have got, that farmers as a class are asking for some favour at the hands of the public?—That is right; we wanted to eliminate that idea entirely.

11,772. You thought it was the duty of the Farmers' Union, although they were precluded by the order of this Commission from saying anything as to what they felt must be the right policy, to take the earliest opportunity of removing what they considered was a wrong impression, and an impression calculated to do the farming industry very great harm?—A very erroneous impression.

11,773. And the purport of this document on the one hand is to show that farmers, if the Government say they are to do so and so, are perfectly willing to conduct their businesses according to their own ideas as to what is best—without Government guarantees or interference?—Yes.

11,774. But, on the other hand, the purport of it is that if the Government ask them to do something which they consider economically unsound from the farmers' point of view as distinct from the general point of view, the farmers are entitled to some guarantee which shall indemnify them against serious loss; and when the time arrives they are quite willing to say what in their opinion the guarantee should be?—Yes.

11,775. But they have been asked for the moment to concentrate on costs?—Yes.

11,776. And they are told there may be some opportunity for them to say something on policy?—Yes.

11,777. So that all this criticism of your inability to say anything about policy to-day, arises through the fault of the Commission, if it is anybody's fault?—I think I hinted at that all through.

11,778. *Mr. Smith*: I think you said that for next year you considered 80s. would be needed for wheat?—In all probability I think that will be about a fair estimate.

11,779. Would not that give a very substantial profit, not to say an excessive profit, to some farmers?—And it might not show anything for others.

11,780. Therefore, is it your suggestion that you have to make the position of the farmer on the poorer soil secure, and at the same time hand over to other farmers a very large profit through the guarantee; in fact, an excessive profit? Is not that the difficulty with all flat rates? Has not it been the difficulty with coal mines, too?

11,781. I put the question to you?—Well, it is a difficulty. The same difficulty applies in other industries. That will be my answer.

11,782. I mean when it is 75s. a quarter. We are informed that a farmer on 66 acres has made £346 10s. profit, plus £33 interest, which means £380 on 66 acres at 75s. That hardly suggests the necessity for 80s., does it?—I cannot speak on that particular instance.

11,783. It was evidence given here by a farmer?—I cannot be responsible for another man's evidence, and I am not going to be.

11,784. But you do not doubt it as a statement of fact, do you? It was given here as evidence by a farmer?—I am neither going to say it is true nor untrue. I am not in a position to make any statement in regard to that.

11,785. But if it is true, to increase the price of wheat, as you suggest, would simply mean adding to the profits which you are already making?—On the other hand if I were to produce, as I can, farmers who would show their yield will not be 2 quarters per acre and will show a decided loss, would you agree that the price should be raised?

Chairman: You must not ask questions. Will you answer the question Mr. Smith asks you?

11,786. *Mr. Smith*: Do you think it is possible for land to be kept under wheat production if it grows only 2 quarters?—Yes; it might be through the exigency of the season that you will only get 2 quarters.

11,787. Do you suggest that this season is a poor wheat season?—Certainly. We are decidedly under the average. All the returns show that.

11,788. You also stated that you wanted this with a free market. Do you suggest, therefore, that you are to have the full play of the market when prices are up, and then to be guaranteed when prices come down, and to be guaranteed at a point which shows a substantial profit?—If we had a free market next year, we should ask for no guarantee whatever. That was my answer; that I would be prepared to take the free market.

11,789. I think you gave one answer, a minimum price with a free market?—That is for the future policy, but not for next year.

11,790. When you state that farmers can get on very well under any policy, do you suggest that you are speaking for the general body of farmers in that respect?—I can only say that this has been before the Council, and has been approved by the Council of the National Farmers' Union.

11,791. Would you agree that there has been a demand for guarantees?—Certainly, there has been a demand for guarantees. There is a demand for guarantees.

11,792. Could you tell us where that demand has come from?—From the general farming body.

11,793. Therefore, this statement that they are not seeking it as they can get on well under any policy, would not represent the general mind of the farmers?—No, not that. There is a demand for guarantees because, as I have already stated to this Commission, we have been put out of joint by the war, and by the demands made upon us by the Government. That is my answer.

Chairman: We are very much obliged to you for your very interesting evidence.

(*The Witness withdrew.*)

MR. JAMES WYLLIE, B.Sc. (Agri.), N.D.A. (Hons.), N.D.D., C.D.A., the National Farmers' Union, England, called and examined.

11,794. *Chairman*: You have put in a *précis* of your evidence and attached to that are various appendices. May I formally put them in as part of your evidence?—Yes.

11,795. You have also sent the Secretaries to-day a statement headed: "Analysis of cost of production of wheat, 1919 crop." I am sorry to say the regulation of the Commission is that we cannot ask questions until the Commissioners have had the opportunity of considering the statement upon which they base their questions, and, therefore, to-morrow I daresay you will be informed whether the Commissioners will be prepared to ask you questions based on the analysis of cost which is now circulated. You have also put in, which is to be circulated: "Summaries of costs of productions of cereals, potatoes, mangels, or oats, etc.," which is included in the new sheet?—Yes.

Evidence-in-chief handed in by Witness:—

1. The Witness has been lecturer on Agriculture and Agricultural Book-keeping since 1910 at the West of Scotland Agricultural College, Glasgow, and, by permission of the Governors of this College, he is assisting the National Farmers' Union in the preparation of its evidence upon costs of production. He has had considerable experience in farm costings work; is a farmer's son and has a thorough knowledge and experience of practical farm work and management.

2. The Witness appears for, and on behalf of, the National Farmers' Union.

3. The National Farmers' Union has, so far as circumstances permitted, endeavoured to ensure that the statements of costs should be drawn up according to a uniform plan, so that comparable results might be obtained from various districts, also that only reliable and *bond fide* statements should be presented to the Commission.

4. The Union prepared a series of Schedules (*see* Appendix IV., Part A) setting out the constituent items that should be dealt with in the preparation of statements of costs for various agricultural products. These were sent to the Committees of the County Branches of the Union with a request that representative farmers, who would be able to put forward statements of costs of production based on these lines, should be approached, and that from their records, or by a process of estimation, draft statements should be prepared. The Witness then undertook a five weeks' tour through selected districts and met the farmers who had been invited to prepare statements of costs, and collected the statements. The Union has been heavily handicapped on account of the shortness of time at its disposal, but it is able to present over 200 statements of costs obtained from various parts of the country†. A summary of these is also set out.

5. The statements submitted have all been subjected to a very careful scrutiny, and only those based upon considerable detail have been accepted. The farmer, in each case, has been asked to give explanations of any figures which differ much from the normal, and every figure put forward is submitted as honest and *bond fide* in every respect.

6. The statements have been taken from individual farmers farming holdings of various sizes and of various grades of land, and the question at once arises how far they can be taken as representative of the costs for the whole country. Upon this point the Union is of opinion that the evidence has been obtained mainly from the better and more skilled class of farmers. This condition must be kept in mind in attempting to draw from the statements conclusions applicable to the whole country.

7. The following Appendices are annexed†:—

A.—Principles followed in the preparation of the Statements of the Cost of Production of the various agricultural staples.

B.—Summary of the Statements of Costs, with observations.

C.—Detailed Statements of Cost of Production.

D.—Memorandum on the basis for calculation of manurial values in milk costings.

[*This concludes the evidence-in-chief.*]

† *See* Appendix No. IV.

11,796. *Mr. Green*: I suppose you are here to-day on behalf of the National Farmers' Union to answer questions with regard to costs and balance sheets?—Yes; with regard to costs only.

11,797. Only costs. You are not empowered to answer any question with regard to policy?—No, not at all.

11,798. You have in paragraph 7: "'C' detailed statements of cost of production." What we should like to know is whether these are real costs or estimated costs?—In answer to that, I would like to point out that in the introductory statement it is stated that farmers were approached to put forward statements of costs of production either from their records or by a process of estimation. I might say that, as you are perfectly well aware, there are only a very small number of farmers in this country who have been keeping actual records from time to time of costs of production; and further, that if we had limited our investigation simply to those farmers, we would not have been able to get much information. We were absolutely forced to fall back upon a process of estimation, so that the statements are partly based upon actual records and partly upon estimates.

11,799. What proportion are actual records, and what proportion are estimates?—The majority certainly are estimates. I would not like to say just off-hand what proportion it is; but I think you will find in going through the detailed statements that wherever the statements are based upon actual records that is stated.

11,800. Are any of these statements made from field operations; that is, field costs' time put down on the labour sheet, and so on?—Yes, in certain cases they are.

11,801. What is the proportion out of the lot?—As I say, I would not like to say off-hand; but a small proportion.

11,802. A very small proportion?—Yes; I would even say a very small proportion.

11,803. Then, are you prepared to answer any questions with regard to—I do not know whether you call these costs or balance sheets?—Yes, I call them costs.

11,804. For instance, there is the statement with regard to sheep, Appendix IV, Part B (*j*). There is an extraordinary deficit in all these accounts on sheep, is there not?—I think you have used the proper word, "extraordinary": I admit they are extraordinary.

11,805. Were these particular farms selected in any way?—No, they were not.

11,806. I see they are mainly pertaining to the southern counties, Hants, Wilts, and Dorset?—Might I say that in the course of my investigations I have discovered that there is a very strong feeling in the southern counties of England that arable sheep farming is very unprofitable, and these particular cases were submitted with a view to substantiating the farmers' opinion with regard to the profitableness of arable sheep farming.

11,807. So that there is a kind of special pleading on these accounts about sheep; that is to say, to prove the farmers' point about arable sheep farming on these particular farms?—I would not like to put it that way. The farmers have a certain opinion; but there has been no attempt whatsoever at putting forward figures simply to prove that opinion.

11,808. Did you examine all these accounts very carefully?—In each of these cases I did.

11,809. I suppose the losses are, more or less, estimated?—You will notice I do not call these losses; I call these really deficits, and, as I have explained in a note in one of these cases, it is very difficult to say exactly what is the loss attaching to sheep farming on such farms, because of the difficulty of saying exactly what proportion of the cost of growing roots should be charged against the sheep, and what proportion should be charged against the following corn and other crops.

11,810. Turn to the Sheep Account No. 3, on Farm 10, (App. IV, Part C), this one, which has the large deficit of £2,272. This land is in Hants. Is not this an extraordinary amount to charge for aftermath, £6 15s. per acre, £391 10s.?—I am quite prepared to admit that that seems to be a high figure to put upon aftermath. It was so high that I asked the farmer a special question on that particular point. His answer was that he calculated it on the basis of about 15 cwts. of hay as a second cut. He valued that 15 cwts. of hay at the market price.

11,811. Was he a tenant-farmer?—I could not say.

11,812. He did not have to pay this as rent or anything like that?—No, it is not rent. You will find that that is rather an exceptional case; it is the only case in which the aftermath has been estimated in that particular way. But you can quite well understand that to a certain extent I have to put forward the farmers' own particular opinions. In many cases I have been able to get them to modify their opinions in accordance with what I thought was right.

11,813. In this particular case you did not get the farmer to modify this amount?—In this particular case he thought that that was the fair way to take it.

11,814. It seems to me rather a case of estimating profits on hay and then charging it against the sheep. I see in several of these accounts you have charged 7s. 6d. per acre for hedging and ditching. Do you not think that is a very large proportion to charge against the cost of production?—In certain cases I consider, from the information which has been put before me, that it is not a bit too high.

11,815. Do you think the farmers really expended that amount on hedging and ditching?—In certain cases I have no hesitation in saying that they did.

11,816. Take the case of the owner of a 300 acre farm, that would mean his spending over £100 a year on hedging and ditching?—In certain districts they do it and in others they do not. I think in certain cases, if you look through the accounts, you will find that nothing like 7s. 6d. an acre has been charged.

11,817. I know, of course, that the hedges and ditches are in a very bad condition at the present time, and I suggest to you that they have not been spending that amount of money upon them, and, therefore, that it must be an estimate?—I agree it has been estimated.

11,818. *Mr. Thomas Henderson*: There is a point in the examination of Mr. Donaldson that I would like your view upon. He gave it as his opinion that about 40 per cent. of the expenditure in farming was due to the cost of labour, and he referred us to you for details. First of all, do you agree with that estimate of his?—I cannot say at the present stage exactly whether 40 per cent. would be a fair proportion to charge for labour or not, taking the farms as a whole. All I am prepared to say is that what may be in Mr. Donaldson's mind I cannot say, but what may have been in his mind was that in these analyses of costs, taking the crops all over, you find, roughly speaking, that about 40 per cent. consists of man and horse labour.

Chairman: I think Mr. Donaldson said that those particular figures applied to his own farm, and he referred to Mr. Wyllie on the general question.

Witness: May I say that is one of the special points we hope to bring out in our analyses of the results in connection with the balance sheets.

11,819. *Mr. Thomas Henderson*: I see you include interest on capital in your costs of production. In defending that method, I think you say that in the opinion of most economists that is a fair charge?—Did I say in the opinion of most economists?

11,820. Yes, your actual words are: "In the opinion of most economists the cost of production must also include a charge for interest on working capital and a proportionate share of the expenses of management"?—What was in my mind at that time was, that in the opinion of most agricultural economists that was so.

11,821. You admit you were referring to agricultural economists?—Yes.

11,822. That is quite a different thing, as, of course, you know?—Yes, I agree.

11,823. I wanted to know who the economists were that you referred to. Of course, there are some agricultural economists who say it is not a fair charge?—Certainly.

11,824. You take the contrary view; you say it is a fair charge?—I do.

11,825. Would you mind elaborating your grounds for that belief—if it is not too big a task?—It is rather a big task to explain in any detail. I do not know whether I should be in order in attempting to deal with that.

11,826. I think it would be desirable. I personally hold the contrary view.

11,827. *Chairman*: If it can be answered shortly?—I would like to say, in the first place, in answer to the question, that I know perfectly well the views of ordinary accountants on this subject, but I would also like to say that, from what I have read of accounting in America, there are two distinct schools of thought in that country even as regards industrial costings. There is one school which holds strongly that interest on capital should be included. The larger school, I admit, holds that interest on capital should not be included in costs. On the other hand, if you take agricultural cost accounting, you will find, I think, that so far as America is concerned and so far as Germany is concerned the majority of the authorities agree that interest on capital is a fair charge. If necessary, I could quote the authorities here.

11,828. *Mr. Thomas Henderson*: Of course, you admit that it is very largely a debatable point?—Yes, I admit that, but what I was going on to say was this: I want to make it quite clear that I do not include interest on capital with a view to increasing the costs with the object of demanding a higher price.

11,829. Of course, we can make the adjustment ourselves?—What I want to make quite clear is whether we include or exclude interest on capital it will not affect the selling price. There is an impression that we want to put in interest on capital in order to make the costs as high as possible with the object of making out a demand for a higher price. That is not our object at all—that is not my object.

11,830. I see also you include a proportion of the cost of management?—Yes.

11,831. Do you think that is in the same position?—No, I do not; I hold most emphatically to the view that you do not get the full cost of production unless you include a proportion for management. I quite agree that the question of interest is a debatable point, but I will not go so far with regard to management; I do not hold that that is debatable at all.

11,832. You know that is not the orthodox economic view—I am not on agricultural economics just now, but on ordinary economics. You are aware of that of course?—In a general way, I am.

11,833. If a man is a particularly skilful manager he will get a larger proportion of profit as the result of his industry. You are putting a certain definite charge to it. What would you call the extra due to his management?—So far as I can see on this question of management the farmer is entitled to get as manager of the farm a reasonable salary, meaning by that such a sum as he would require to pay to a competent manager. You must keep in mind in this connection that you have a certain number of farms in this country which are run by salaried managers, and it seems to me that if you want to put all farms on a common basis you must allow the farmer something as manager. Apart from that particular question I do not think that you can say that you have included the whole cost of production in your cost unless you make some allowance for the farmer's management.

11,834. You are simply taking an element of equalisation over farms generally. How do you charge the oats and the hay?—I have consistently charged them at market price less the cost of marketing.

11,835. Of course, that is another debatable point?—I admit that.

11,836. Take the analogy—I do not know whether you will admit it is a close one or not: Say an iron firm takes over a coal mine, does it charge itself with coal at the market price in its accounts?—I do not know.

11,837. Do you think it is likely that they do?—I do not know.

11,838. Would such a firm not be getting a very important raw material at a lower price than the market rate, and would it not thereby be increasing its profit?—It is very immaterial so far as the farmer is concerned whether he charges these things at market price or at the cost of production; it will not affect his total profit. But a farmer to my mind wants to know which system of farming is going to be the best from a financial point of view.

11,839. *Mr. Prosser Jones*: I did not quite catch whether you said with regard to the cost of labour that 40 per cent. went to labour in 1918?—No. What I said was that we hoped in the second stage of our inquiry to bring out clearly what proportion of the total cost of running a farm belongs to labour. But I would point out that in these analyses of the cost of production of crops it so happens that man and horse labour together constitute about 40 per cent. of the cost, taking it roughly.

11,840. Would there be any difficulty when you tabulate these figures, in giving us the proportion paid to labour in the year 1914 as well?—You mean in connection with the balance sheets?

11,841. Yes. When you are comparing these figures of the cost of labour in 1918 could you also give us the cost of labour in 1914?—Yes, we intend to do that, certainly.

11,842. In connection with the variation in the rents could you tell us from your observance of the accounts whether the higher rented farms yield proportionately higher crops?—No.

11,843. You have not got that information?—I have not seen any direct relation between the rent of the land and the yield of the crops at all.

11,844. That would be very useful to us if you could get it, and to know whether landlords are justified in charging £2 or £3 an acre more rent unless the yield also is proportionately high?—Of course, rents depend not altogether upon the yields but also upon the money value of the crop.

11,845. *Mr. Lennard*: In arriving at your charges for horse labour I notice you charge for the oats the horses consume at market price less cost of marketing?—Yes.

11,846. Supposing the selling price of cereals in general fell 20 per cent., what difference would a 20 per cent. fall in the price of oats make in the cost of growing wheat?—I would not like to say off-hand, but I should say that it would be quite possible to make such an analysis from the figures which we have on the cost of horse labour. What I mean is, we have a good many statements showing the cost of horse labour, and these statements show the amount of oats which are included in that cost. It would also be possible in our analyses to show what percentage of the labour consists of horse labour and what percentage consists of man labour. It would be possible, but I have not done it.

11,847. The same consideration of course applies to seed?—Exactly.

11,848. Then there is also the question of imported fertilisers and imported feeding stuffs. Of course the relation is not so direct there, but if any fall in freight rates brought down the price of imported cereals you would expect it also, would you not, to bring down the price of imported fertilisers and imported feeding stuffs?—Naturally.

11,849. Can you tell us whether the freight forms a larger or smaller proportion of the cost of fertilisers and feeding stuffs than it does of cereals?—No, I am afraid I could not tell you.

11,850. Supposing fertilisers and feeding stuffs fell in price that would obviously reduce the cost of growing cereals?—Obviously.

11,851. Would it be possible for you to work these figures out for us and give us an estimate of the percentage decline in the cost of production of wheat which would follow from a given percentage decline in the world selling price of cereals both in regard to the directly affected requirements, such as oats and seed and those less directly affected, such as feeding stuffs and fertilisers?—I should be only too glad to try to do that. I may say I thought of making such an estimate for the future, but I rather thought that that was not my business.

11,852. I think it would be of great help to the Commission if you would do it?—It would be only my own opinion on the matter, and I do not know that would carry very great weight. I have not sufficient information at my disposal to enable me to say with any surety what the fall in freights is likely to be; that is one of my difficulties.

11,853. I quite realise that in regard to those commodities which are affected by changes in the rates of freight the estimate could not be anything like so near as in regard to the oats and the seed. But if you could give us the two figures separately, the one more certain and the other more hypothetical, it would assist us very much?—I see your point, and I will do my best to get it out for what it is worth.

11,854. I should be very grateful if you will?—Would you mind repeating exactly what you would like me to do?

11,855. What I really want is as much information as we can get as regards the degree to which the cost of producing cereals would fall automatically if the selling price of cereals fell?—I follow.

11,856. Would it be possible for you with regard to these analyses of costs to break up the percentage of total cost allotted to man and horse labour, so that we can see how much is due to each of those elements?—I have already attempted to do that, but I discovered that it was a much bigger job than I expected. I was so pressed for time that it was absolutely impossible to get it completed. I have it in hand as a matter of fact, because I recognise the importance of having that division made.

11,857. How soon do you think you will be able to supply us with that?—Unfortunately my time is not my own these days, but I will do my best to get it out as soon as possible.

11,858. *Mr. Nicholls*: In connection with Farm 64 (App. IV., pt. C), have you any evidence from any of the smaller cultivators in Lincolnshire under the heading of Potatoes?—Unfortunately not. It has been extremely difficult all through to get any evidence from the smaller men. We have done our utmost to get such evidence, but as you know perfectly well it is very difficult. If we had had more time it would have been possible to go and make a personal investigation on the spot, and we might have got such evidence, but so far we have failed.

11,859. With regard to dykes, I notice that where dykes come into the accounts they have put down 25 chains at 6s. a chain, to be cleaned out every four years. Have you any evidence that these dykes were cleaned out every four years at the rate of 6s. a chain?—With regard to that item, in the case of this particular farm I do not think that this work was done at all.

11,860. Then it is an estimate really of what ought to be done?—Yes.

11,861. My experience of Lincolnshire and other districts where there are dykes is that it is a much longer period than every four years before the dykes are cleaned out?—I do not think you will find that particular item comes into the costs which follow at all.

11,862. Also with regard to the laying of hedges, 7s. a chain is allowed, and it is assumed that those hedges would be laid once in five years, and that they would be trimmed every two years. I wonder whether anybody's experience of hedging is that hedges want laying every five years? I do not want to go into the whole thing, but those two items alone show to me that at least those two items are overdrawn?—You will notice the note just below, that although that estimate comes to 3s. per acre per annum, based on the figures which are given, only 2s. per acre has been charged. I think the farmer in this case realised that his details were rather overdrawn, and he did not charge the full 3s., he only charged 2s.

11,864. That is for the hedging?—For what are called fencing charges.

11,865. *Mr. Parker*: In Part B,* where you give the summary of the cost of production, I see that the cost per acre of wheat varies from £11 1s. 5d. to £23 3s. 6d., and that the cost per quarter varies from 62s. 9d. to 124s. 10d. What are mainly the chief causes for these very large variations in the cost of production?—With regard to the cost per acre you will find that it depends very largely upon the way in which the land is treated.

11,866. I am alluding to the 1918 figures?—Taking the cost per acre in the case of the highest cost, £23 3s. 6d., that was on a highly rented farm where everything was being sold off. The costs of manuring were very high, and you will notice in that particular case the straw has been credited at £3 per ton because in that case both the grain and the straw were sold. That cost includes not only the cost of marketing the grain, but also the cost of marketing the straw. With regard to the lowest cost, that is on light land where the cultivations, of course, are very much lower, and the manuring is considerably lower.

18,867. The costs of production varying to such an extent as they do will not be a very sound basis for founding any recommendation upon with regard to a guarantee, will they?—I agree that when you see very large variations in cost of production, taking it per acre or per quarter, that one is somewhat at a loss to know exactly what line to take.

11,868. It seems to me these costs are so wide that they cannot form any proper basis upon which to make any recommendation?—I would like to suggest that if you are considering the cost per quarter the only possible line that you can take is to exclude the very highest. If you take the very highest cost, the 124s. 10d., that was quite an exceptional case, and that case I should rule out at once. You may also find at the other end certain costs which are low for some particular reason. I should also rule those out, and if you rule out the extremes at either end you will find after doing so that the variation is not so considerable.

11,869. Of course, these costs of production are greatly affected by the quality of the land and by the ability of the farmer, and many other things?—Very largely by the ability of the farmer.

11,870. *Mr. Smith*: Having regard to the figures of yields, are they estimates or actual?—In certain cases they are actual yields based upon figures of threshings which were actually put before me. In other cases with regard to 1919 crops, of course they can only be estimates. You will notice that in a good many cases nothing has been put in the yield columns at all. In these cases I was not able to satisfy myself that the farmer was in a position to put forward reliable figures.

11,871. Have you formed any opinion as to the class of soil that gives the best results in cereals?—What do you mean by the best results—as regards yield per acre?

11,872. Yes?—It is almost impossible to say. I should say that much more depends upon the treatment of the land than upon the nature of the land.

11,873. Would you think that sandy soil would give the best yield per acre?—Certainly not.

11,874. Can you just explain to me how it is in Part B, section B* in your 1918 barley crop the Somerset sandy soil gives an average yield of 36 bushels per acre, which is four bushels above the next one and considerably above the average for the whole? Also in regard to the 1919 crop in the case of the Berkshire sandy soil again, apart from Dorset, you have got the highest yield per acre?—Of course everyone knows that sandy soils are typical barley soils, and that you do get the largest crops of barley on good sandy soil. You used the term "cereals" and now you are speaking particularly of barley.

11,875. Do you suggest this result would follow?—Which result?

11,876. That in a sandy soil you would get the best yield of barley?—If it is well treated.

11,877. Almost the same thing applies in the 1919 crop of wheat. It is true it is after a fallow. In Berkshire sandy soil the average yield is 32, whilst the average yield in Lincolnshire is only 27. I should have hardly thought that Berkshire sandy soil would have been a better wheat-producing medium than Lincolnshire soil?—I hope you will bear in mind that these are particular cases and that other factors besides the soil affect the yield.

* *See* Appendix IV.

11,878. The soil has been very much emphasised here by farmers?—I do not know what farmers have been doing here.

11,879. They are always pointing out to us the difficulties they have in these sandy soils?—Of course there are sandy soils and sandy soils.

11,880. I notice the same thing applies in regard to mangolds, that the average yield in Part B section E* is the highest on Somerset sandy soil again. One is rather interested in these figures in that respect, because we have always had the farmers lamenting their hard lot where they get these sandy soils?—In taking that case of mangolds, you will notice that the cost per acre is £29 5s. 6d. That indicates at once that it must have been getting specially good treatment in some shape or form.

11,881. Even then it is not the highest. You have got one as high as £31 and you have another one £29 17s. 1d. in Hants. These figures hardly harmonise with the previous statements we have had in regard to the class of soils which farmers have to deal with. Then as regards potatoes, in so far as Lincolnshire is concerned, I am rather surprised that Lincolnshire is not more prominent. I see there is nothing in 1918 for Lincolnshire, which is a very big potato-growing county, and in 1919 I notice under that column the average yield is less than the average for these other counties. I always thought that Lincolnshire was very prolific in its production of potatoes?—I have no doubt you are thinking of south Lincolnshire. This particular case happens to come from north Lincolnshire, from the wold land.

11,882. You have no figures in regard to south Lincolnshire?—No, unfortunately we have not.

11,883. *Sir William Ashley*: I should like to ask you one question which is not really of very great importance for our purpose, but is of interest from the accounting point of view. I see that in your instructions in Part A Sch. D* and onwards, you suggested to the farmers that they should enter something for interest and something for management for every kind of produce. Did they as a matter of fact do that, or did you in the office add 5 per cent. for interest and something for management?—I should say that in the majority of cases farmers feel very strongly on this point. They feel very strongly that costs are not complete unless they include something for interest and something for management.

11,884. But as a matter of fact, they did themselves put down figures for those two items?—In the majority of cases where they put a statement before me they had included it. They were uncertain in some cases as to how to get at what charge to make, and in many cases I discussed the matter with them before arriving at what particular charge to make for interest. They were not sure as to how to make the charge, but they felt very strongly that there should be a charge included; that is the position.

11,885. Quite so, and you advised them that 5 per cent was a reasonable charge to make?—I took that as being a reasonable charge for interest on capital.

11,886. Have you got any grounds for that?—My reason was that I considered that if a farmer has £1,000 of capital, he is entitled to get such interest as he could obtain by investing that £1,000 outside the farm altogether. That is why I took this figure of 5 per cent. as being a reasonable amount to charge.

11,887. To cover the rate of interest on a safe and untroublesome investment?—Yes.

11,888. Therefore, before the war you would have recommended something like 3½ or 4 at most, instead of 5 per cent.?—I recommended 3½ per cent. before the war.

11,889. Leaving undiscussed the question of whether interest should be charged or not—because after all it does not really matter—you have charged this interest only on the outlay as set forth here—for instance, on wheat No. 1, Farm No. 1*—that is to say, you have charged it only on what used to be called the circulating capital employed; you have not charged it on the fixed capital?—Of course interest on capital has been charged in arriving at the cost of horse labour in most cases, and it has also been charged on implements in arriving at the charge for implements in most cases.

11,890. So that, in one way or another, you have included interest on all the capital invested?—Yes, I reckon that I have.

11,891. With regard to management, were they in the same perplexity as they were in respect of interest. Did they consult you as to what would be a fair charge?—In some cases the figure which they put in for management was, in my opinion, extraordinarily low. In other cases it was extraordinarily high, and in neither of those cases did I accept the figures; they have been modified to that extent, after discussing the question with the farmers.

11,892. It looks as if, from Farm No. 1 and such other examples as I have observed, you have roughly charged £1 an acre for management?—On the average it will not work out quite so high as that.

11,893. What principle did you adopt?—The basis which I took was to allow for management, about £300 per annum on an average 300-acre farm—that was £1 per acre—but part of that £300 was allocated to live-stock and only the remainder was distributed over the crops. So that if we were charging £300 on a 300-acre farm we would not be charging £1 per acre against the crops but something less according to the way in which the farm was run.

11,894. Yes, but how did you get that figure in your own mind. Is that the market value of the services of the man to manage a 300-acre farm?—My idea is that if you wanted a man to take full charge of an average 300-acre farm—I mean a mixed farm—you would require to pay an inclusive sum of rent of about £300. It might be £50 less or it might be £50 more, according to the nature of the farm, but that was my sort of standard; it is difficult to be any more precise than that.

11,895. Based upon your impression not of what you ought to pay, but what, as a matter of fact, you have to pay?—I would consider from what I know that managers who are in full charge of farms of that size and of that kind will be getting at the present time an inclusive sum of round about £300 per annum.

11,896. If you look at farm No. 3,* in the second column I see you put: "Management, say, £300 over 255 acres" in that particular case?—Yes, in this particular case it was a farm which was worked very intensively. You have happened to strike upon one which is perhaps rather exceptional in this particular connection. This particular farmer has had a college training. He has a B.Sc. in Agriculture—and naturally he values his services rather higher than the ordinary farmer would do. That is his own valuation in this particular case.

11,897. Did the majority of the returns actually give a figure for management?—The majority certainly did.

11,898. Would the average of that majority be approximately the same as your £1 an acre?—No; in the larger farms in a good many cases it was put in as low as 10s. per acre, and then in some cases farmers are rather strong on this particular point, that it was unfair to charge the same amount for management to, say, roots as to potatoes, because they say potatoes require much more management than roots, and they attempted to put a larger amount against potatoes and a smaller amount against roots.

11,899. But in every case where they charge what seemed to you far too little, before altering the figure you have corresponded with them and gained their assent to the larger figure?—Certainly. I have either seen them personally or corresponded with them as you say.

11,900. So that you have been engaged in educating them as to what they ought to charge for management?—Well, you can put it in that way, I suppose.

11,901. *Chairman*: You mentioned interest. If you will kindly look at wheat No. 1 Farm No. 1* you say there: "Add interest at 5 per cent. on £935 7s. 5d."?—Yes.

11,902. That is the total cost of growing 100 acres of wheat in 1918?—Yes.

11,903. You add 5 per cent. interest on the cost?—Yes.

* *See* Appendix IV.

11,904. That is not the capital of the farm?—On the outlay I think we call it.

11,905. You answered Sir William by saying that it was interest upon the circulating capital plus interest as you mentioned on horse labour?—I consider that in a farm you have a certain amount of fixed capital in the way of horses and machinery and so on, and then you have your circulating capital.

11,906. Still this charge is not upon circulating capital, it is upon the cost of the crop?—Of course, roughly speaking you may say that part of the cost consists of circulating capital.

11,907. I do not wish to cross-examine you. I merely want to get what in fact you had in your mind in answering Sir William. Then if I may just refer you to the tractor account, Farm No. 1,* again on the subject of interest, you observe that you charge interest upon the tractor on the left-hand side of the account. It is in "Overtime" tractor account for 2 years You charge interest on £350 at 5 per cent., £17 10s. Then you credit the account with the work done for this particular farm. First of all you charge interest on the total cost of growing the 100 acres, £935 7s. 5d., and you have also charged it on an item of that cost?—That question has been raised, and I have considered it. I have worked it out for my own satisfaction, and I have come to the conclusion that where you are charging interest on horses and interest on machinery as we have usually been doing, if you take about 5 per cent. on one half of the outlay on the growing crops, you arrive at a total figure which is about equal to 5 per cent. on the total capital in the farm.

Chairman: I will not carry the question further because it seems to me you have charged interest on the total cost and also charged interest on an item or items in that cost. I will leave it to some other Commissioner to deal with the matter.

11,908. *Dr. Douglas*: You have already had your attention called to the very wide differences in the costs of production quite generally. We understand that these statements are presented to us in order to help us to form an opinion as to the cost which must be guaranteed in order to protect the producers against loss. I think you recognise that as they stand they carry us a very short way in that direction?—I recognise the difficulty.

11,909. Can you make any suggestion to help us in that respect?—I am sorry to say I cannot.

11,910. I have no doubt it occurred to you yourself in presenting these figures that they really do not help us very much as they stand. How do you account chiefly for these variations?—I think I have already tried to explain that. The variations are very largely due to local conditions in the way of the treatment of the soil and the ability of the farmer. You will find also that the weather has a certain effect. You may find that the weather is much more suitable in a certain district in a particular year than it is in another district. You may find that the seed time in one district is favourable and in another district in the same year it may be unfavourable. Those factors may make a certain difference in your cost.

11,911. Do you believe that these causes of, let us say, abnormally high cost shift from place to place to any considerable extent?—I should say they do.

11,912. Will you let us know what has led you to form that opinion?—From my own experience I think you will find it is so. If you take two adjoining farms you might find in the case of one farm in one year that the cost will be higher than in the case of the other and in the next year it may be the other way round.

11,913. On account of seasonal difficulties pressing more hardly upon one than upon the other?—It is what the farmer would call luck.

11,914. My object is to find out whether, in your opinion, averaging would help us at all. You will agree that averaging is a very useless method for guarantee purposes, but do you think in relation to crop-growing the movement of the difficulty year by year from one district to another would make averaging of any practical value?—No, I am afraid that factor is too small to make any material difference.

11,915. The difficulties really are pretty permanently localised?—I am sure of that.

11,916. You suggested that a certain farm—if I remember rightly it was No. 26*—should be excluded from the calculations. On what ground was that?—In this particular farm the wheat crop, which was costed, was taken after bare fallow. It was heavy land, and, of course, the cost of the following was very high. A considerable part of that fallowing had to be charged against the wheat and the average yield was comparatively low, so that you get a very high cost per quarter.

11,917. That is a very common element in the cost of wheat production, is it not—a proportion of the cost of fallowing?—Certainly, but in this case I think you will find that the conditions were rather abnormal. I thought this particular case might be interesting.

11,918. I am taking this case just in order to try to get at any views you can put before us as to the correction of these estimates?—With this particular case it was very poor clay land in Essex which was taken over by a certain farmer. He has been working it for a number of years back, and he has been sinking a lot of capital in it in a way of liming it, mole-draining it and manuring it. He admits himself that he is growing wheat at a loss, but he is getting a return for his draining and his liming and his manuring from other crops, principally hay and peas. That is why I mark this case as being exceptional as regards wheat; I thought it might be interesting, but I consider it is of no value.

11,919. Would you consider that a mistake is being made in cultivating wheat on this land?—It is impossible to grow these other crops, I suppose, continuously.

11,920. That would be your answer: that wheat is an essential element in the rotation even if it is cultivated at a loss?—Yes, even if it is cultivated at a loss; that is the farmer's own impression.

11,921. In an exceptional case like that the price of the wheat would really be a very small element in the whole conditions?—Exactly.

11,922. Are there any others of these cases that you regard as very exceptional?—No, that is the only one from the cultural point of view; there are one or two cases where the crops had been weathered at harvest and the return of course was very small.

11,923. You have priced all these crops as if they had brought the full price?—Yes, that is so.

11,924. They have not been put in at what they actually sold for but at what they would have sold for if they had got the full price?—In certain cases we have put down what was lost.

11,925. It is mentioned in one case?—I think it ought to be in in two cases.

11,926. I see a mention of bad weathering in two cases. In those cases the amount of the return was reduced, was it?—Yes. These were put in as instances of one of the risks in cereal growing; that was the point in putting these in.

11,927. I see you have credited the straw in each case at £1 a ton?—Yes.

11,928. What was the basis of that?—We took that as the standard after very careful consideration. We wanted to arrive at something which would be fair between the crops on the one hand and the live stock on the other.

11,929. You are assuming that the straw was consumed on the farm?—Yes, and in cases where the straw was sold off we have credited it at a much higher sum—£3 a ton, I think.

11,930. Which was the controlled price, if I remember rightly?—We did not credit the crop with the full market price of the straw; we assumed that there would be some profit on the straw if you were coming to results. We wanted to put in something which would allow a certain profit on the straw as well as on the grain, because in these cases the straw is grown for profit as well as the grain.

11,931. So that really there is no element that you can fix upon which would help us in finding any common measure for these prices, or any basis for a recommendation of a guarantee?—I find it extremely difficult to generalise at all.

* See Appendix IV.

11,932. Of course even on these figures, leaving out your extreme cases, they run from 62s. to 108s.?—Of course, as I have said before, I think that the only possible guide one can get from these particular figures is to leave out the extremes at either end and then take the average of the others as a standard.

11,933. Then you really do come back to averaging?—Yes, you must get some figure as a standard, I would not call it an average.

11,934. I understood you to say that averaging was not the proper principle?—It would not help you directly. What I mean is, you could not take an average from these figures and take that as the basis for fixing prices; you would have to make some allowance.

11,935. Would you develop what it is you do suggest, because I am afraid I do not follow?—I am sorry I cannot quite see my way through this.. You would get an average from these farms where the management is, I consider, better than in the average of the farms. You would get an average from these farms which would only apply to farmers who would all be classed 75 per cent. and over as regards management, and you would have to make some allowance for the fact. What allowance you would have to make I would not like to say.

11,936. So that really we are a long way from any costings basis in these figures?—I do not quite follow that question.

11,937. These figures do not give us anything that we could call a costings basis. We should have to make all sorts of allowances and discriminations, and the ultimate result would depend very much more upon these allowances and discriminations than upon the figures themselves?—Yes, and I submit you will always have to do that.

11,938. You mentioned a point about what I was going to ask you: you said that these farmers were above the average of the country. I suppose you have had a good deal of personal contact with these farmers?—I think I can say I have met the majority of them.

11,939. You are accustomed in your ordinary work to be a great deal in touch with and in communication with farmers?—I am.

11,940. You have formed the impression that these men were men who were distinctly above the average?—Distinctly.

11,941. It would not be likely that so economical a result of production would be obtained by farmers generally?—I should not think so.

11,942. Take the case of Farm No. 38*, where you have a fairly high cost of potato growing. You detail a number of operations. Were these operations all actually performed in the year under review?—Yes, I am told so.

11,943. These are all, of course, desirable operations. Would you not think that a producer was rather fortunate in his weather conditions if he was able to carry out all these operations in a single season?—I find that the amount of work which is given to potatoes as well as to other crops varies very considerably from district to district, and an outsider going into a certain district is inclined to say that farmers are really wasting their work. But it is very difficult for one who does not know the local conditions to judge as to whether that is the case or not.

11,944. Even if a very large number of operations were desirable in potato growing, there are many seasons in which they cannot all be carried out. Is not that so? A man has often to do with less in the way of weeding, and so on, in some seasons than he would wish to do?—That is quite true.

11,945. Was the crop in this case estimated, or was it actually ascertained and sold?—That was the actual crop, I am told, in this particular year. It is the 1918 crop, so that we were able to get the actual yield.

11,946. It was only an average crop, was it not—the yield is just about the average, is it not?—I would not like to say definitely with regard to Kent, but I should say it is rather more than the average for Kent.

11,947. With all these operations you would expect rather more than an average in a favourable year such as 1918?—Yes, certainly.

11,948. *Mr. Rea*: In your Appendix B* you have given us two schedules of grain production, one for 1918 and one for 1919 for wheat, barley oats. I see, however, that the farms taken in the two years are not the same—I mean you have taken one set of farms in 1918 and another set in 1919?—That is so.

11,948A. Are the conditions much the same? Did you wish us to compare the year's costs one with another?—I might explain with regard to that point that our first intention was to confine our attention to the 1918 crops, because we had only balance-sheets to show for 1918 crops. That was our first intention. Then we were asked specially to investigate the cost of production at the present time. We had, of course, to take the 1919 crops, and it was going to be asking too much of different farmers to prepare these statements for both years. We had to take either one year or the other.

11,949. If you mean us to compare one year with the other do you think that the nature of the farms taken is really such as to be comparable—that is to say, that we may take the 1919 results as they stand and apply them to the farm in question in the 1918 figures?—I should think, speaking roughly, that that would be quite fair.

11,950. So that on the average of the country generally the increase shown in the 1919 list would apply over those shown in the 1918 list?—I would not like to say definitely without going through them in more detail, but considering the way in which the farms were selected—because we were at some pains to select typical farms—I should think there would be a certain comparison possible.

11,951. You do not think there would be any great discrepancy between them, say, that the 1919 farm might be stronger land and would incur more expense in the working of it?—No, I do not think so.

11,952. The costs are simply given at per acre for each farm, but the costs vary a lot, and if we added up the total of this column, "Costs per acre," and divided it by the number of farms, that would give us an average cost in one sense. You might say it would give the average cost of producing wheat upon this number of farms?—Yes; but unfortunately you will find that in some of these cases the costs apply to a much bigger acreage than in other cases.

11,953. That is what I was trying to get at; it would not really give us a true result as to the cost per acre?—No, I am afraid it would not.

11,954. There are several of them about £19; they might be either the largest or the smallest, and whichever they were would affect the result considerably?—That is so.

11,955. You cannot help us in that respect, I suppose?—It would be possible, I think, to put in, in the majority of cases, the acreages to which the costs apply. That was one question which was asked as a matter of fact. We asked specifically for that particular reason for the acreage to which the costs referred, and I think we should be able to get the acreage in the majority of cases.

11,956. Do you think you will be able to supply us with that?—I think that can be done.

11,957. Because it looks, does it not, from your replies to Dr. Douglas' question as if it would have to go on some sort of system of averaging at the finish?—Yes, I am afraid it is difficult to get away from it.

11,958. Do you yourself think, as a costing expert, that from taking individual farms we can get at any costs which would be, we will say, a reliable index of the country generally?—I might say on that point that our difficulty has been the shortage of time. If we had been able to get, instead of 200 statements, 2,000 statements, then you might have been able to get an average which would have been of some use.

11,959. That is the average again. You think that we must work on some system of average, do you?—Yes; but my difficulty with regard to what we have here is that we have such a small number of cases. An average over 2,000 cases would be a much sounder average than an average over 20.

11,960. Yes, I agree. With more time you could have got more individual cases, which would have given a larger lot on which to base the average?—Yes, certainly.

11,961. These that you have taken I think you indicated were with regard to the better class of farm

* See Appendix IV.

as a rule, so that they can scarcely be taken as typical even of farms in the same district—I mean as regards giving an average?—The farms were typical, but what we consider is that the management was above the average.

11,962. So that we should have to take rather a lower standard than this in arriving at an average to give justice to the average farmer?—Yes, quite.

11,963. In the cost of producing potatoes is there any differentiation between early potatoes and main crops?—These are all main crops.

11,964. Because the figures in Kent, for instance, seem to be higher than in most places, and I wondered if that was because they were main or early crops?—They are all main crops.

11,965. It is simply because of some local conditions that make the costs higher?—I take it so. I am told that the wages are higher in Kent than they are in certain other counties.

11,966. *Mr. Batchelor*: In Part A, Sch. C,* you refer to the number of working days per horse per year. Have you formed any opinion from the figures placed before you or from your own knowledge as to what you would consider is a fair average number of days for a horse working per year?—I am not prepared to say what I would consider a fair average at all, because even if we could get an average figure in this case it would be of very little value. You may find that on one farm it is only 200 days, whereas in another farm in another district it may be 300 days.

11,967. Wil you refer to Farm No. 1,* in the county of Oxford. I presume you were at that farm?—Yes, I was.

11,968. If you look at the number of working days given there for the year beginning October, 1917, and ending September, 1918, it is said that the horses there worked 263 days. I presume that is accurate?—In this particular case actual records were kept.

11,969. Now look at the next year for the same farm. The number of working days in that year are 240. Do you observe that in the month of February they only wrought 9½ days. Have you any idea of why that was?—There may have been a snow storm; it may have been bad weather; I could not say definitely.

11,970. For the month of March only 18 days were worked. This is an arable farm, is it?—Purely arable.

11,971. For the month of April 22½ days are worked. These three months I should have expected in Oxfordshire probably to be the months when the horses would be doing something on the land?—Possibly.

11,972. Yet they seem to be three of the months when the horses were doing the least work. You have no idea how that is accounted for, have you?—No, I could not say. These particular figures were not prepared for this special purpose at all, and I think you may take them as being actual facts.

11,973. Do you know whether in the spring of this year, on that particular farm, there was any flooding through wet weather?—I could not say.

11,974. Compare the spring with the months of, say, December and January. Taking December, I presume Christmas Day was a holiday, this being in England, and there were at least four Sundays in the month, that is five days on which the horses would not be working, and as they wrought 23 days they were pretty well wrought the rest of the time. Is not December a month in which you would expect to have some broken time?—It is not a question of what one would expect; it is a question of what actually happened.

11,975. You have no explanation that you can give of why in the spring months there is so little work done with the horses on this particular farm, whereas in the dead of winter there is so much work done?—No, I have no explanation to offer at the present moment.

11,976. Now I would like you to look at some of your costs, and probably you can give us some further explanations. £23 3s. 6d. is the cost per acre in Lancashire of wheat?—Yes.

11,977. I see you have "Straw credited at £3 per ton." That is in Part B, Sec. A, and Part C, Farm No. 15,* you say: "Straw to be credited at £3 per ton." I presume you actually credited it before you arrived at the figure of 71s. 10d.?—Yes.

11,978. Would you look next at Farm No. 42.* This is the sandy soil in Berkshire to which Mr. Smith referred. There the note is, "Conditions for harvesting almost ideal. Yield of grain average, but rather under average of straw." I presume that these conditions had a considerable effect, from the fact that the yield of grain was so high comparatively speaking, and the cost so low on sandy soil?—Would you mind repeating that.

11,979. I am presuming that the note, "Conditions for harvesting almost ideal," had an effect in bringing out the fact that you have the yield of 32 bushels on sandy soil at a cost of £15 15s. 3d.?—Yes.

11,980. You have less expense than usual because of those better conditions?—Certainly.

11,981. It was referred to by Mr. Smith as being unusual that you should have such a result on sandy soil, but the conditions were almost ideal?—Yes, quite.

11,982. Will you look at Farm No. 61.* This is the case of the lowest estimated cost of production of wheat for 1919. Can you amplify that in any way. To begin with, it is a farm of 90 acres arable land and 45 acres of pasture. The wheat is after potatoes and turnips on six acres, mangolds on 11 acres, and clover on 14 acres. Do you think there is a sufficient charge for the unexhausted manures—£2?—That figure was arrived at from the information which the farmer put forward. He gave me an indication of the manuring for the potatoes, turnips and mangolds, and he considered that that was a sufficient amount to carry forward. We did consider that question.

11,983. This land is rented at £1 16s. 6d. per acre, so that it is quite good land?—Yes, I suppose it must be. I would like to point out with regard to that particular case, that the farmer is, so far as I could gather, a particularly able chap. He is a small farmer, and he seems to be a particularly good manager. I would consider that as one of the cases where the costs are reduced because of the very efficient management.

11,984. I notice, for instance, the ploughing is 25s. per acre only whereas if you compare it with the highest cost of production on page 70 the ploughing there is £2 16s. 3d. per acre—that is Farm No. 46,* heavy clay land in Kent?—Of course there is a big difference in the nature of the soil for one thing.

11,985. Exactly?—But it is quite possible that in this particular case there was more work being done.

11,986. You also notice in this heavy expense on page 57 that there are 15 tons of farmyard manure applied to the wheat crop?—Yes.

11,987. Also I see you have a note: "No allowance is made for share of bare fallows, which must be done every fourth or fifth year"?—Yes.

11,988. What was the estimate of yield in that particular instance?—The estimated yield was three quarters for this year and the average yield 27 bushels.

11,989. Is there any reason why it should be below the average do you know?—I really could not say in this particular case.

11,990. It is a very heavy cost of production and if you bring down the yield of course you put up the cost?—Yes, quite.

11,991. Now will you go to Farm No. 50.* This is sandy soil in Somerset with a rent of 35s. per acre?—Yes.

11,992. It must be good land although it is sandy?—One might presume so, but it does not necessarily follow.

11,993. You finish up at the end of the barley by saying: "Soil sandy loam, easily worked"?—Yes.

11,994. So that probably the word "sandy" appearing in Part B, Section B,* is slightly misleading?—It is.

11,995. It is not sandy soil; it is sandy loam?—Yes, there is a big difference between a pure sandy soil and a sandy loam—that is quite correct.

11,996. Dealing with oats, will you look at Farm No. 45.* On heavy soil in Yorkshire the yield per acre is 57½ bushels. I think that is the lowest cost for oats in 1918. Can you tell me what the rent per acre is,

* *See* Appendix IV.

because I am not quite certain if I follow. It says: "Rent, £210, rates £30 18s. 0d., taxes on 20 acres land £15." What is the meaning of that?—The £210 is the total rent of the farm of 110 acres.

11,997. That is 38s. 2d. per acre. What I do not follow are the next two items, "rates £30 18s. 0d., taxes on 20 acres land £15." There must be a misprint there somewhere?—I am sorry I cannot quite explain why that item of taxes should come in there.

11,998. That is what I want to get at?—It may be one of those cases where I have omitted to cut out the income tax. That is the only possible explanation I can offer. I might say that in certain cases income tax was put in, but of course we have cut it out, and it is possible I omitted to do that in this particular case.

11,999. I want to emphasise the fact that this is Garton's Supreme oats sown after turnips. I presume that is a very fine oat?—It is a good yielder.

12,000. In addition to that, this has got 22 waggon loads of farmyard manure on to the oat crop. Does that help you to account for the very high yield?—It certainly would help it a little.

12,001. And that even after turnips. You do not know whether the turnips were manured or not, do you?—No, I could not say.

12,002. Now look at Farm No. 61,* the 1919 crop of oats. The rent is £1 16s. 6d., and you have under "Cultivations" "Tractor plough (hired), £1 12s. 6d.," and "Tractor cultivator (hired), £1." Would these be less than what it would cost an individual if he did the cultivation with his own implements?—Do you mean with a tractor plough or with horses?

12,003. Either one or the other?—It might be more, it might be less.

12,004. Has it not been generally the case that the hire so far of tractor ploughs or tractor cultivators has been less than what the actual cost would have been?—If you are referring to tractor ploughing, where it has been done by the Government it has been done at a loss?

12,005. Yes?—Yes, I have always thought so.

12,006. In this instance it is after barley, peas and tares. Would you not have thought there should have been some residual value charged against this oat crop from the peas and tares?—That is a very debatable point.

12,007. Do you know what treatment they got with regard to dung?—No, I could not say.

12,008. You notice in this particular instance also that the estimated yield for 1919 is 52 bushels of grain and 25 cwts. of straw, whereas the average over the past five years is only 40 bushels of grain and 21 cwts. of straw. Have you any idea why this farmer estimates to have so much bigger a yield this year?—This was a field of winter oats. I asked particularly about that point. I thought possibly there had been some mistake in the figure but the farmer assured me that he quite expected to get that yield.

12,009. You did not see the crop yourself, did you?—No, I did not see it. He admitted that he was going to be very fortunate with this particular crop.

12,010. Now will you look at the cost of mangolds, Farm No. 50*—this is the instance of sandy soil to which Mr. Smith referred. If you look at the heading you will find it is "Sandy loam, easily worked"?—Quite so.

12,011. That is slightly different from the mere word "sandy." Will you also look at the artificial manures that these mangolds got in addition to farmyard manure. They got 5 cwts. of superphosphates, 2 cwts. of sulphate of ammonia, and 6 cwts. of salt—pretty heavy artificial manuring, is it not?—Not extraordinary for mangolds.

12,012. You start also with the soil in clean condition, I notice?—Yes.

12,013. So that although this farm is in Somerset you get this good return, which is only what you would expect when you see the details of the kind of land it is, and the condition in which it was, and the way it was handled?—Exactly.

12,014. Now will you look at Part B, Section A 2,* the 1919 crop of wheat? You are probably aware that there is a minimum guaranteed price of 75s. 6d.?—Yes.

12,015. Do you observe that in 15 cases out of 24 for the 1919 crop the cost of production is over 75s. 6d.?—Yes.

12,016. In the other cases it is under 75s. 6d. Do you believe that in these 15 cases the farmers will lose money if they only get 75s. 6d. a quarter for their wheat?—I do not see that I can believe anything else.

12,017. Coming to the barley, similarly the minimum guaranteed price is nearly 70s. In the case of the 1919 crop of barley you have eight instances where the costs are over that, and three only where they are under. The costs vary from 57s. 6d. to 105s. 1d. Do you think if the minimum price was all that was to be got that these eight farmers would lose money on their barley crops?—I do.

12,018. Do you not think it is possible that the yields per acre which are estimated may be slightly under what they will turn out?—It is possible.

12,019. Would you agree with me that it is very likely that the costs are probably more accurate than the estimated yields?—Undoubtedly there is possibly a bigger chance of error in the yield than there is in the costs.

12,020. A very slight variation in the yield would turn the loss into a profit?—Another 2 bushels per acre would make a big difference.

12,021. Now to deal with the oats, the minimum guaranteed price for 1919 is about 47s. 6d. Do you notice that out of the seven cases in six it costs more than 47s. 6d. to produce the oats, and in only one case is the cost under the minimum guaranteed price, the costs varying from 36s. 3d. to 75s. 4d. In the same way do you not think that in some of these cases the yields are too low?—In that particular connection one is forced to accept the farmers' estimate for this particular crop.

12,022. Would you agree that the farmers in estimating yields, if they err at all, will err in estimating them low enough?—I am not sure that I would like to put it so definitely as that.

12,023. For the purpose for which the estimates are made?—One would naturally expect, knowing the purpose, that they would not be likely to overestimate the yield.

12,024. Exactly. I notice in many instances—I need not detail them—that the estimated yields where you can compare them with the average yields are less than the previous average?—Of course, I hope you will keep in mind that in this particular year the yields are comparatively poor.

12,025. Quite; they are. That is what I want to find out. Are you of opinion that the yields for this particular year are down probably from the average because of the treatment land in general has got since the war began by so much being taken out of it and so little put in?—I suppose taking the country as a whole one would be forced to that conclusion, but I would not like to say that that applies to all of these cases.

12,026. No, it was a general question I was asking you, that in general the land of the country is not in as good a condition as it was at the beginning of the War—the arable land?—I do not think there is much doubt about that. My own experience is that there has been a considerable amount of what you would call dilapidation going on.

12,027. And cross cropping?—Yes, cross cropping.

12,028. Taking fertility out of the land without putting anything back in exchange?—Certainly.

(*The witness withdrew.*)

* *See* Appendix IV.

FOURTEENTH DAY.

WEDNESDAY, 24TH SEPTEMBER, 1919.

PRESENT:

SIR WILLIAM BARCLAY PEAT (*Chairman*).

DR. C. M. DOUGLAS, C.B.
MR. G. G. REA, C.B.E.
MR. W. ANKER SIMMONS, C.B.E.
MR. HENRY OVERMAN, O.B.E.
MR. A. BATCHELOR.
MR. A. W. ASHBY.
MR. GEORGE DALLAS.
MR. J. F. DUNCAN.
MR. W. EDWARDS.
MR. F. E. GREEN.
MR. J. M. HENDERSON.
MR. T. HENDERSON.
MR. T. PROSSER JONES.
MR. E. W. LANGFORD.
MR. R. V. LENNARD.
MR. GEORGE NICHOLLS.
MR. E. H. PARKER.
MR. R. R. ROBBINS.
MR. W. R. SMITH, M.P.

Mr. JAMES WYLLIE, B.Sc. (Agri.), N.F.U., etc., recalled and further examined.

12,029. *Mr. Ashby*: The general principle which guides you in estimating costs, I take it, is the statement which you have made on one or two occasions, that the cost must represent the minimum net price at which a crop can be sold if the farmer is to get a fair return on his capital and a fair reward for his work?—Yes, that is my basis.

12,030. Looking, for instance, at your figures for the cost per quarter of wheat in this statement, say, in 1919, at what figure would you suggest that a price should be fixed in that list?—Do you mean in the Summary?

12,031. Yes, of wheat?—I have never considered the question of fixing a price. I have considered it my business to put the facts before you so far as I can ascertain them, but not to go any further than that.

12,032. Following up your principle, that the cost of production represents the minimum figure at which a price must be fixed if a farmer is to get interest on his capital and reward for his labour, the price would have to be fixed in this case at 114s.?—I do not quite think that follows. I think that in any question of fixing prices, although I would rather not enter into the question at all, there will always be some farmers who will not get this return on their capital and reward for their labour.

12,033. In that case cost of production has nothing to do with price?—Not the maximum cost of production.

12,034. What cost of production has got to do with price?—Something considerably less than the maximum cost.

12,035. As a matter of fact in that case you would exclude all interest or all reward for management on a certain number of farmers' operations?—It would work out in that way, certainly.

12,036. So that whether the price is fixed by the market or by some social action, price has nothing at all to do with the costs of production?—I am sorry I do not quite follow what you are trying to get at.

12,037. Let me read this statement again. You say: "The cost of production is defined at such a figure as will represent the minimum net price at which a crop can be sold or otherwise realised if a farmer is to get a fair return on his invested capital and a reasonable remuneration as manager of his business." From your statement, that on these figures any price fixed must be certainly below the maximum cost of production, you do necessarily exclude interest on a lot of farmers' capital and remuneration for a lot of farmers' labour in your price?—Certainly; it is bound to work out in that way in practice.

12,038. It comes to this, does it not, that you would pay interest on capital and remuneration for labour only when the capital is efficiently used and the farmers' labour is efficient?—It does not necessarily follow. In this particular case I should say that it is very largely a question of the weather. With the most efficient management you are still up against the difficulty of the weather, taking this particular year, 1919.

12,039. Let us take 1918. If you look down that list you will see the cost per quarter varies between 62s. and 124s. In that case in which there was no particular complaint against the weather, when your price was 76s. 6d., you were still refusing to pay a certain number of farmers, who may or may not have been inefficient, their total costs of production?—I agree.

12,040. So that you do come back to this point, that interest on capital and remuneration for the farmers' labour is only a claim on the price, so to speak, when both are efficiently used?—You may put it in that way if you like, but I am not quite sure that it is altogether a fair statement.

12,041. Would you look at paragraph 6* of your evidence? You say: "Upon this point the Union is of opinion that the evidence has been obtained mainly from the better and more skilled class of farmers." On what do you base that statement?—It is partly based upon personal meetings and conversations with the farmers who have submitted these statements, and

See 13th Day, Evidence-in-chief of Mr. James Wyllie.

comparing these farmers with other farmers I have met. It is partly based also upon the fact that it is only—I do not want to say anything disrespectful about the general body of farmers—from the more intelligent class of farmers that one can hope to get statements of this kind at such short notice.

12,042. Do you think that if you study carefully the whole of these records which have been presented to us they would substantiate the view that these records are obtained from the better and more skilled class of farmers?—I think they would.

12,043. Would you look at wheat for the years 1918 and 1919, the second column, on the right hand?* This is a statement of average yields, is it not, over a period, not necessarily the same period in each case, with a variation between 24 and 38, which shows an average allowing for the fact that it is a 504 lb. quarter of very slightly above the average for the whole of England? On the other hand, in the same column for 1919 the average only just about comes up to the average for England, and if you look at barley and oats I think you find that in the case of oats in particular the yield is very low, although there are not enough instances to enable one to say much about it. But certainly those yields alone do not lead one to the view that your farmers are more skilled or better class farmers than the average?—Of course it does not necessarily follow that these farmers are farming under the best conditions in order to get good yields. It may happen that in the majority of these cases—I do not say it has happened—the farms are on rather poorer classes of land. It is impossible for me to judge how that would affect the average of these particular cases.

12,044. Have you formed any idea as to how far these costs per quarter on cereals as stated in Part B* are representative of general costs?—No, it has been quite impossible for me to form any such opinion, partly from want of time. If I had been able to go amongst the farmers for six months instead of for one month I might have been able to form an opinion, but any opinion I could give just now would be of no value.

12,045. You have not taken any steps to look at the figures themselves to see how far they could be regarded as representative?—We made an attempt to select farms which were typical of the different districts. That was our aim, but of course it is hard to say how far we succeeded in that.

12,046. You realise that taking the 1919 wheat crop, for instance, it is hardly sufficient to enable one to judge how far it is representative because the numbers are so low, but just looking at it in this way your lowest cost is 66s. a quarter, taking the shillings and leaving out the pence, and your highest is 114s. You can take the mean or the average at almost exactly the same figure—80s. You have only eight above 80s., and you have 13 below 80s., and you get a considerable concentration at the bottom—two at 69s., three at 71s., two at 73s., three at 75s., and two at 78s. Taking those figures one would suspect that if you had 200 examples instead of 21 your average would be more likely you would come out at 70s. than at 80s. because of the concentration at the bottom?—It is perhaps quite right to say that it is more likely, but I am afraid that it does not take us very far.

12,047. I am just showing you how statisticians would test your figures if there were enough of them to be tested—I admit there are not enough of them to enable them to be fairly tested?—I quite see the point.

12,048. As one who has had some experience of collecting statistics, I say if you multiplied your number by 10 your average would come somewhere where your concentration is. Would you look at Schedule B of your Part A* where you say: "Allowance for annual value of farm dwelling-house according to local rates assessments" What exactly does that mean?—You want to know why I make an allowance?

12,049. I want to know how you make it as well?—My idea is that the farm dwelling-house is a personal concern of the farmer and that it is not really a part of the farm as a business concern.

12,050. Do I understand rightly that when you take the rent of the farm for apportionment between the different departments you deduct the rent of the dwelling house?—I attempt to do that in every case.

12,051. Looking at Sch. G, Part A,* of the principles to be followed in the preparation of statements of cost of production of home grown food, one can understand the principle quite well in the case of the first three items and the last two items, but are there not good grounds for the opinion that hay ought to be classed with the first three items?—I quite admit that is an extremely debatable item; there is much to be said on either side in my opinion.

12,052. Have you any idea of what proportion of the hay on a farm is actually sold?—I suppose it is somewhere about 20 per cent.—so I am told.

12,053. Have you any idea where a market for any more could be found?—At a smaller price I suppose a market could be found.

12,054. What would consume it?—More of it would be consumed.

12,055. What by?—By the same stock as consume what is consumed at the present time.

12,056. It is consumed mostly by town horses, is it not?—Yes.

12,057. Do you seriously put forward the idea that the consumption of hay by town horses could be increased so as to materially affect the amount that is now sold off the farm?—I do not suppose it would, but that really does not affect my judgment on that particular point. That is hardly the line that I take.

12,058. Now would you turn to Part D.* The manurial value per ton of the foods consumed there is based on Hall & Voelcker's Tables, with some adjustment for qualities of cake. Which figure of Hall & Voelcker's is this?—These are 1914 figures.

12,059. Food consumed in the sheds, or food consumed in the yards?—Food consumed in byres it is.

12,060. Look at the last sentence on that page which says that Hall & Voelcker "Further state that where the manure has undergone deterioration through inferior management, a deduction not exceeding 50 per cent. of the figures given, may be made on this account." It appears that what you have in fact done there is to say that the manurial value per ton of feeding stuffs has doubled since 1914, but that as 50 per cent. of the value is lost, the 1914 values may stand. Is that not so?—No, I do not think so. I do not quite know how you would arrive at that conclusion.

12,061. You multiply 17s., I presume, by 140s., and so on?—Yes.

12,062. So that you have not, as a matter of fact, discounted your 50 per cent. wastage?—I have not allowed for the 50 per cent. wastage except in so far as the wastage has been put against the increase in manurial value since 1914.

12,063. That is exactly the same thing, is it not?—I do not admit that the manurial value has increased 50 per cent., the figure which you mention.

12,064. Why not?—Because the greater part of the manurial value lies in the nitrogen. In these figures nitrogen was taken at 15s. per unit. Last year the unit value of nitrogen on the land was not more than 18s., an increase very far short of 50 per cent.

12,065. What about potash?—It is very difficult to say what unit value you would put upon potash last year.

12,066. You can put it at 500 per cent., can you not?—You can put it at 500 per cent., or anything you like, but I would like to point out in this connection, that if you are going to claim an increase in the unit value of potash to the extent of 500 per cent., it follows from that that your land has been dilapidated to the extent to which the potash has not been applied.

12,067. That is quite true. What about phosphoric acid also?—The increase there is considerably more than in the increase in the case of nitrogen.

12,068. Roughly 100 per cent., is it not?—Yes, 100 per cent. roughly.

12,069. So that in any case to get at the manurial value you would have to make considerable increases in Hall and Voelcker's Table?—I understand that these authorities are allowing an increase of somewhere about 30 per cent.

12,070. You did not allow it?—I have allowed it indirectly. I have put that increase against the wast-

* *See* Appendix IV.

age which takes place where manure is made under these conditions.

12,071. It is difficult to see how you did it because in one case you say the wastage is at least 30 per cent., and then you say Hall and Voelcker allow a deduction of 50 per cent.?—No, a maximum of 50 per cent.

12,072. You have taken 30 per cent. and set it against the increase in the manurial value?—Yes.

12,073. Do you think this 30 per cent. loss is unavoidable?—I do think it is unavoidable under the conditions which have existed during this year 1918-19.

12,074. It has been going on for a good many years surely?—Yes, it has.

12,075. It was not unavoidable then?—In cases which I have known the manure tanks have not been emptied during this last year for a very obvious reason which I need not mention.

12,076. Do you not think that this wastage of 30 per cent. is one of the items of mismanagement for which the taxpayer has to pay when you have a system of guaranteed prices based upon estimates of costs like these?—Would you please keep in mind that the wastage in liquid manure from a farm is a very small item compared with the wastage of sewage in towns.

12,077. That has nothing to do with the point. When you have manurial values, for instance, amounting to nearly 2d. a gallon for milk, if there were any considerable wastage there—I mean if you were going to increase that 50 per cent.—¼d. a gallon may mean a considerable profit to the farmer or it may mean a considerable loss to the consumer because a ¼d. a gallon may turn the price 1d. a quart?—I quite see your point, but as a practical farmer I am very well aware of the difficulties of utilising the liquid manure economically. It can be done in theory, but it is altogether a different thing in practice.

12,078. Would you turn to Farm No. 1.* This tractor account relates to this farm No. 1 for which you have got the cost of growing roots and cereals, etc. The tractor has been working on these crops for which the costs are set out has it not?—Yes, I presume so.

12,079. You notice that for both years in the tractor account you have interest charged at £30 16s. 0d. for the two years, and you notice that in your first wheat account you have also charged interest at 5 per cent.?—Yes.

12,080. Do I understand rightly that you first charge your interest on your tractor and find the cost of your tractor ploughing and set the cost of the tractor ploughing against the wheat and then again charge interest on it?—I should like to explain exactly that point; it was raised yesterday. I wish to say that I have done that quite deliberately. I am well aware that it is quite wrong from a strictly accounting point of view. I want to make that quite clear, but it was done as a matter of convenience. I considered it was necessary to charge interest on capital. The next question was on what basis the interest was to be charged. I considered it was necessary in order to bring out fairly the cost of horse labour compared with the cost of, say, machine labour to include a charge for interest on horses. Then it meant that I was charging a certain amount of interest on the fixed capital, horses and machinery, and I had to charge a further sum which would bring up the total charge for interest on the farm to about 5 per cent. on the total capital invested in the farm. I can assure you if you take the method which I have adopted of charging interest on horses and machinery and then charge interest at 5 per cent. on about half the outlay on the different crops you will get a total sum which will be approximately the same as 5 per cent. reckoned on the total capital.

12,081. You do not charge interest on half the outlay, you charge it on the whole of the outlay in this No. 1 account. You charge 5 per cent. on £935, £46 15s.?—In that particular case that must be a mistake. Of course I ought to explain that this particular statement is really the farmer's own statement. I have taken this statement pretty much as it came from the farmer.

12,082. *Chairman*: The farmer is coming here to give evidence is he not?—Yes.

Chairman: So that you will be able to cross-examine the farmer himself on that point.

12,083. *Mr. Ashby*: The same principle runs through the whole of the accounts. Do I understand that you not only pursue this principle of charging interest to the capital and then charge it again to the outlay, not only in the case of this tractor account but also in the case of the horses all through?—Not all through. I should say that has been the principle adopted in most cases. In other cases you will find that no charge for interest has been made on horses or on machinery, but 5 per cent. on the estimated capital per acre has been charged throughout the accounts. My whole object in this connection has been somehow or other to get 5 per cent. on the total capital thrown against the various products.

12,084. Have you taken any steps to find out what amount of cash capital apart from the fixed capital these farmers have?—Yes, we have a mass of information on that point.

12,085. What is the relation of the two amounts?—It has not been tabulated so far.

12,086. So that you are really guessing at what charge ought to be made for interest on outlay after you have made your charge for interest on fixed capital?—In most of these particular cases we had that information before us—we had valuations before us.

12,087. Did the valuations show the amount of cash capital?—Yes, the valuations plus an allowance for floating capital.

12,088. What allowance?—The allowance which the farmer would consider necessary.

12,089. Not what he had, but what he considered necessary?—He has had according to his accounts.

12,090. Why did you not charge on what he has and not make an allowance for it?—I have no doubt I did charge on what he had.

12,091. You said just now that you charged on an allowance?—In some cases it may have been necessary to do that.

12,092. On the whole it is rather a method of piling up interest, is it not?—No, I do not think it piles up interest at all—I am quite sure it does not.

12,093. Would you look at this tractor account again for a moment. The tractor with the plough and the cultivator and so on cost £352 9s.?—Yes.

12,094. It is worked for two years and you have written off £85 13s. for depreciation?—Yes.

12,095. Have you any idea what the life of that tractor would be?—If you look at a note by the farmer under the second account you will find he says "If I was starting my machinery accounts now, after experience, I should depreciate at least 33⅓rd per cent. per annum." I take it that indicates a life of three years in this farmer's opinion—roughly.

12,096. When he has spent practically £96 on repairs, do you think that is justified?—That is the farmer's opinion; that is not my opinion.

12,097. Have you any idea as a costings expert of what is a fair depreciation to put on a tractor?—I have not seen sufficient data to enable me to form any useful opinion as regards that. I have known of cases where the depreciation of 50 per cent. would not be too high, but I would not like to put that forward as anything like an average figure.

12,098. Below "Costs of cleaning foul land" there is this statement: "The above expenses clean the land, but it has still to be enriched." Do you agree with that statement. It is there on your responsibility, more or less?—I agree with it.

12,099. What makes you think that the land has still to be enriched?—There has been nothing put into it as far as I can see.

12,100. Just let us run through this list; it is rather interesting. In wheat No. 1 you have dung on part and artificial manure on part. We will leave the artificial manure out. I assume that is sulphate of ammonia. You have dung or artificial manure in the case of every one of these crops of wheat. Taking your roots, you have got superphosphate on each of them. In the crops following sheep you have not got any superphosphate on or anything. Then turning over to the next page you have roots with dung and

* *See* Appendix IV.

superphosphate. You have no manure with the oat crop at all certainly, but with the first barley crop and the second you have manure again. Do you not think that this farmer has been pretty well keeping up his farm?—Yes, but what I think this statement means is that before crops can be grown on this particular land which has been cleaned certain manure ought to be given. That is all I take out of it.

12,101. I understand that in arriving at these costs you sometimes apportion the rent between the different fields or between the grass and arable; is that so?—Yes.

12,102. Is there any principle upon which you do it?—There is no principle that I know of except that if you have a farm consisting of poor arable land and good permanent pasture, it is only common reason that a heavier charge for rent should be put against the good permanent pasture than against the poor arable.

12,103. I could not find any instance in which your method of dividing the rent was displayed?—There is no general rule that I know of.

12,104. No, but is there any instance here in which you have apportioned the rents—do you remember one instance?—I think you will find one in the case of farm 64, if I remember rightly.

12,105. That is management charge, is it not?—If you look down about the middle of the page you will see rent £395, rates so much, apportioned as follows.

12,106. I see?—There is so much taken off for the farmhouse, so much for the cottages, so much for the buildings, and the remainder is charged against the land.

12,107. While we are on this page I would like to deal with one or two of these items on it. The rates interest me. How do you arrive at the principle of apportionment that is adopted there? It says farmhouse rent, £15; waggoner's house, £7 rent, rates £2; garthman's house, £7 rent, rates £2; and so on?—I take it that is an apportionment of so much to the £.

12,108. The general rate in the £ is 4s., and in these cases it happens to work out at 5s. 9d.?—I suppose it is a rough and ready apportionment; it may not be accurate to 10s.

12,109. It rather piles it up against the arable land, does it not, when you come to estimate your wages, and so on?—The total difference would be very small.

12,110. Would you look at the management charge. The total management charge is £250. You charge £1 per acre on the arable land and £25 for all the grass and £25 for the stock—that is £50 for the grass stock?—Yes.

12,111. Have you any idea what the proportion of the sales would be of the stock and the cereal products on this farm?—I have not at the present moment.

12,112. This is a Lincolnshire arable farm mainly?—Yes.

12,113. With some cattle feeding?—There are a certain number of cattle and sheep kept through the winter that is all.

12,114. Is it not within your knowledge that in these eastern counties on arable farms the receipts from sales of live stock exceed in amount the receipts from sales of cereal produce?—I would not like to say that; I have not gone into the matter fully.

12,115. You do not know whether, as a matter of fact, that charge of £200 per annum against the arable land for management in respect of the produce of which you are asking for guaranteed prices is accurate or not?—The idea in apportioning the management charge is not to work according to the turnover in various departments, but to base it upon the amount of managing required. That was the idea in this particular farmer's mind I know. He considered that his time was mainly spent on the arable land

12,116. Would you look at Farm No. 10 sheep account No. 3* for a moment. You were asked a question yesterday as to the value of that 58 acres of aftermath at £6 15s. an acre. I understood you to say in reply that the farmer estimated that he would get 15 cwts. of hay, and that he was valuing the aftermath at 15 cwts. of hay at market price. Is that so?—I should also have stated, although I do not think I did, that in this particular case he reckoned that he was going to be two bushels per acre of wheat worse because of the fact that the aftermath was folded by sheep instead of being cut.

12,117. Really?—I put that forward merely as an example of the difficulties which one meets with.

12,118. As an authority on agricultural practice what would be your judgment of a statement like that?—I personally was not inclined to accept this valuation at all.

12,119. I was thinking rather of the question of getting more or less wheat because you grazed it rather than cut it?—I would not include that at all.

12,119A. I want to put this to you at any rate: whereas he might be justified in estimating it at the value of 15 cwts. of hay he ought certainly to have cut off all the expenses of making and carting that hay?—I quite agree.

12,120. So that in any case £6 15s. is subject to considerable reduction?—That is one of the few items which if I had a perfectly free hand I would certainly cut down.

12,121. Turning again for a moment to the question of interest, looking down that page under "Interest" you had 5 per cent. on valuation, £2,245, plus £129, £118, and 5 per cent. on working capital, £106?—Yes.

12,122. Your working capital on a flock of sheep is very nearly as big as the valuation?—As an example of how that is got at you have a total expenditure on purchased cakes amounting to over £1,000. I suppose that would be considered as working capital.

12,123. It depends of course upon how long it was used, does it not?—It does, but I take it that that 5 per cent. on the working capital is estimated at about one-half the outlay.

12,124. This sheep account is exceedingly interesting. If you look at the valuation you have 296 ewes, 103 ewe tegs and three rams and 78 wether tegs and sales of 76 tegs, 13 ewes, 40 fat lambs and 107 fat tegs, 60 draft ewes and then you state the valuation on the same basis at the end of the year as at the beginning of the year. Is it within your knowledge that there was a very bad crop of lambs that year or anything?—Yes, I understand that the crop of lambs was under the average.

12,125. It is a pity you did not state the numbers comprised in the valuation at the end and at the beginning so that we really might see what was the cause of some of this big deficit. On the general question did you in the case of this farm take this deficit to the crops?—Unfortunately, on this particular farm, we did not have any crop costing at all.

12,126. I think it is very fortunate that you did not. The ration for a horse on Farm No. 16* rather interests me. Is it at all typical of the rations that they were feeding to the horses on the whole of these farms?—This is taken from three farms under one management.

12,127. When you were estimating the cost of horse labour on the other farms did you not set out some sort of a ration?—I took the rations in each particular case.

12,128. That is what I was asking you—whether this is at all typical?—I should not like to say off-hand whether it is an average ration or not. You find that the rations vary very considerably from district to district.

12,129. Did you ever find them varying according to the number of days worked per horse?—They do to a certain extent, but not directly.

12,130. When there is a variation of as much as 60 days a year, as there is in some cases, would not that be direct?—What I mean is, if you had on one farm the horses working 200 days in the year, and on another farm the horses working 300 days, the cost of feeding would not increase directly in that proportion.

12,131. If you had one horse working for 280 days, and another horse working for 220 days, would the cost of feeding the latter one fall in anything like the proportion?—I do not think so. Horses must

* *See* Appendix IV.

be fed whether they are working or not; that is the unfortunate thing.

12,132. They must, but from these estimates of cost one would think that there was no difference in the ration. That is the impression one gets. Farmers in making an estimate of cost always set down the ration, never allowing for the fact that they are losing a large number of days' work. Sometimes they are only working their horses eight or nine or ten days a month, and yet presumably they are getting the same ration although one knows that they are not?—In many cases in practice they do.

12,133. Feed the same ration when the horse is only working 10 days a month instead of 24?—Not exactly the same, but the decrease is very slight.

12,134. Do you not think that is one of the points in which there would be a great difference between estimates and records?—No, I do not.

12,135. These rates sometimes interest me. Will you look at Farm No. 43.* In Essex the rate is 4s. in the £. Do you know what part of Essex this refers to?—That is somewhere about the Chelmsford district.

12,136. Did you ever take the trouble to ask these people for their demand note or anything?—In a great many cases I actually saw the demand notes.

12,137. They always agreed, did they?—Yes. I may say that is one of the surprises I have had in going round England, to find that the rates are so high.

12,138. *Mr. Duncan*: Will you look at Farm No. 3.* There is an item there with regard to which I should like to get some information. You notice in the account for horse labour there is an item: "Risk, 4½ per cent. on £100, £4 10s." What is that item meant to cover?—I take it that in this particular case the farmer was not insuring his horses, but he thought he was entitled to put in something as an allowance against an occasional horse dying, that being over and above his allowance for depreciation.

12,139. What would the insurance rate on horses be?—I think it is about £8 per cent. at the present time, or £8 10s. per cent.

12,140. I notice in some of the other accounts insurance is put at a very small item?—In most cases I think you will find that insurance on horses has been left out altogether.

12,141. For instance, if you look at Horse Labour No. 3, farm No. 6,* insurance is entered at 7s. 6d. per horse of £100 value?—I do not quite follow that item of 7s. 6d. It seems to me a very low charge if you are going to make a charge at all for insurance.

12,142. Going back to Farm No. 3,* to this item, do you think it is a fair allowance after allowing 10 per cent. for depreciation to charge another £4 10s. per annum on each horse?—That again was this particular farmer's view. As I explained yesterday this particular farmer is a man who has had a very extensive college training, and he considers that he is fairly well qualified to make up costs of this kind. Naturally I was forced to defer to a certain extent to his own opinion. Personally I think it was quite a legitimate charge to make, but it is an open question as to whether a total charge of 14½ per cent for depreciation and risk is not rather high.

12,143. In that connection you stated yesterday that in some cases you had got the farmers to modify their figures to meet what you thought was right. To what extent has that modification taken place?—In most cases the figures were modified as I suggested, but in certain cases the farmers were rather inclined to take their own line.

12,144. Is this statement presented to us as simply the material collected, or is it the material after collection and sifting?—It has been collected and sifted.

12,145. In some cases the sifting has been effected, and in other cases it is simply presented as collected?—In a few cases it is presented as collected.

12,146. The whole of this material has not passed through the hands of those who are sifting it?—It has been approved—I would like to put it in that way.

12,147. It means this: that where an item appears, and the farmer submitting the statements is not prepared to meet what you think is right, you simply send it forward as he puts it down?—Yes.

12,148. So that it cannot be said that the whole of this material has been completely through your hands or the hands of your Committee, and that it is submitted as approved material?—I think you can say, with one or two small exceptions, such as the case of aftermath, that it has been approved. You get exceptions to everything, and you certainly get an exception in that case, but I would not like to say in every case.

12,149. Turn to Farm No. 9,* I think you stated in reply to Mr. Ashby that your method of charging interest was to charge 5 per cent. on the fixed capital, and then to charge 5 per cent. on half the cost?—In the majority of cases that was done. In some cases I said we charged 5 per cent. on the total capital per acre uniformly over the crops.

12,150. If you take this farm No. 9, I think you will find there the interest on the capital charged through the accounts against the various crops, is on the total cost per acre?—Yes. You will find that no charge has been made for interest on horses or on machinery, or other fixed capital; that is the alternative method which has been adopted in this case.

12,151. Is there any way in which we can find out what the effect of this is on the total farming operations for the year—how much the interest really comes to on a farm of a certain size, and some information as to what the actual capital employed in it is?—In this particular case of Farm No. 9, the capital per acre was put at £18. The farmer who is responsible for this statement is an experienced valuer, and he says that at the present time the capital per acre in farms in this district, runs from anything from £18 up to £20 per acre. In this case, if you charge 5 per cent. on £18 per acre, it comes to £270. We have charged 5 per cent. on £16 per acre against the crops; we have charged a little against the sheep, and a little against the cattle. The total charge which we have made in these accounts is £269, compared with the £270 which you get by charging 5 per cent. on £18 capital per acre.

12,152. Is there £18 per acre actually in the farm? Has the farmer actually got that amount of capital in his farm?—I am told he has at the present time.

12,153. You have no evidence from his books, to find out whether he has the amount of capital employed or not?—I would not like to say that we have in this case.

12,154. Have you actual evidence in all the cases which you have sifted to find out what the charge on capital is?—Not in all cases.

12,155. So that you have simply estimated what a man might employ in his farm if he had it capitalised according to the acreage of the district?—Yes—what he says he has employed at the present time.

12,156. So that you give the farmer credit for management at a certain figure and then you allow him interest not on his actual capital, but on what he says he has employed in his farm?—I am quite sure he does not overestimate it.

12,157. I submit to you if we are trying to get at the facts of the costs of production we ought to get at it upon actual figures. However great one's faith may be in one's fellow creatures you cannot base statistics upon faith?—I am afraid you cannot get away in making farm costings from relying upon your fellow creatures.

12,158. Then I take it that these figures are not submitted as actual figures but as your own estimate of the farmers' reliability in regard to the statements he has given you?—I think I may say generally they are as reliable statements on costs as it is possible to get under present conditions.

12,159. That of course is not a certificate as to their reliability?—You can take it any way you please.

12,160. Take your introductory statement in paragraph 6 of your evidence-in-chief. You are dealing there with the selection of the farmers that has been made. You say: "The statements have been taken from individual farmers farming holdings of various sizes and of various grades of land, and the question at once arises how far they can be taken as representative of the costs for the whole country. Upon this point the Union is of opinion that the evidence has been obtained mainly

* *See* Appendix IV.

from the better and more skilled class of farmers." Has the Union formed any opinion as to the class of land that these farmers are farming—whether they are typical farms so far as situation and class of land is concerned, and so on?—I think generally speaking one can say they are typical of the different districts, but you can well understand that in the short time that we had it was impossible to get a sufficient number of farms in the different districts to bring out all the different types. I think, however, you can take it that the farms are typical of the districts to a certain extent at least.

12,161. Are they up to the average, or would you say they are of poorer quality of land?—I would not like to say that they are the poorer quality at all, taking them all over; I do not think that would be fair.

12,162. You have no statement to make as to how they compare in that way?—You see my difficulty: I have not had an opportunity of going over the different districts and making a comparison. Again I had to rely upon the farmers' own statements as to whether their farms were typical or not.

12,163. Will you look at Part B? Just take the costs of the 1919 crop. I think you will find that the medium cost works out at about 78s. a quarter. What is the selling price for the 1919 crop?—I take it it is round about 75s. 6d., is it not?

12,164. So that your farmer here who is working at the medium cost is producing at 2s. 6d. loss per quarter?—I suppose it amounts to that.

12,165. One half of the instances you give are producing at a greater loss than 2s. 6d. a quarter?—Yes.

12,166. Do you think it is typical of English farming that wheat production has been carried on at a loss during this year and last year, 1918?—I should say that during 1919 that would be true.

12,167. Take 1918. I think you will find the medium there runs about 71s. What was the selling price in 1918?—Was it not pretty much the same?

12,168. Yes, but do you think that is typical of English farming during 1918?—As I have already said, it is very difficult for me or for any other person to say how far these few cases—because after all they are very few—represent the whole.

12,169. Yes, but you put these forward as farmers who are skilled above the average, and we may therefore take it that if they are skilled above the average, unless they are working on unsuitable land for their cultivation they are producing at a less cost than the average English farmer is doing?—Yes.

12,170. Yet when we test it by your figures we find as regards wheat production even in the case of skilled farmers one half of them are producing wheat at a loss?—That is the conclusion to which one is forced.

12,171. Are these farmers paying income tax on double their rent?—I could not say whether these particular farmers are doing that or not.

12,172. Farmers generally are less skilled, as you have admitted, than the farmers who have submitted these figures to you. Do you think that there are English farmers who are losing to the extent that these figures show, and who are still paying income tax on their double rent?—I should say there are as they do not keep accounts. I hope you will bear in mind that for income tax purposes there will be no deduction in those cases for interest and management, and if you make no deduction for interest or for management your cost per quarter of course would go down.

12,173. It would go down to that extent?—Yes.

12,174. Do the Farmers' Union want us to accept from these figures that during the year 1919 in the case of skilled farmers above the average working on typical farms half of them are losing money and all they are getting is simply an allowance for management and interest on their capital? Is that what the Farmers' Union want us to accept?—I would not like to take the responsibility of saying what the Farmers' Union think, but that is certainly what I think myself.

12,175. That is what you think from this evidence?—Yes.

12,176. One question on this point of management. You allow £300 for management on a 300 acre farm. Are managers being paid at that figure at the present time? I think you will find if you allow for all the perquisites which the farm manager usually gets, that on a 300 acre mixed farm his salary is round about £300 per annum.

12,177. Have you any actual cases? It sounds rather vague to say allowing for all the perquisites. That is usually the way of avoiding getting to the actual wages that are paid by saying there is a large allowance for perquisites?—I do not put it in that way at all.

12,178. If I put it to you that in Scotland on a farm of that size £200 and house accommodation is a common figure to pay for a manager by co-operative agricultural institutions, and such like bodies, what would you say?—I would not like to take that figure of £200. I have not very many cases in my own mind, but I should be inclined to put it a little bit higher than £200 a year.

12,179. I am putting to you a figure which was actually advertised in the papers last week by one of these co-operative institutions?—That is only one case.

12,180. Yes, but it is the case in one of the best paid agricultural counties in Scotland?—I will take it from you.

12,181. *Mr. Edwards*: Arising out of the questions already put to you, you say you take the dwelling house as a personal concern of the farmer. Would you say the same thing of a farmhouse which is used for preparing the meals for the men and sleeping accommodation for the men, and living room for the men, which to a certain extent is part and parcel of the wages of the men?—I should say in that case you must make allowance for it and charge a correspondingly less sum against the farmer himself.

12,182. You spoke about insurance for horses. It has struck me during the conversations and discussions here as to the practicability of farmers insuring against losses of live stock and against losses of bad harvest, &c., and I should like to have your view as an expert on that point. I presume that to a certain extent in other businesses the principle of insurance applies? Take the shipping business: a ship leaves Liverpool or any other port, and both the ship and the cargo in it are insured against the risk of the voyage. The cost of that I presume is taken out of the profit of the people handling the business? It has struck me whether it would not be a legitimate charge if I were to insure all my risks in that way before taking any profit out of my farm?—I should consider it would be quite a legitimate charge if it were done, but whether it is a legitimate charge where the actual insurance is not paid is a debatable point.

12,183. Coming back to our business here, which, as you are well aware, is to find out the economic position of agriculture at the present moment, and to arrive at some idea of its economic position in the future, I should like to have your view as a costings expert as to whether you think that this method which you follow here to a very great extent—and which is followed by other people from whom we have had heaps of these accounts and estimates dealing with agriculture in sort of watertight compartments crop by crop in this way—is, in your opinion, a sound one to lead us to the right conclusion?—On that point I find very great difficulty. As one who has had some experience in costings, I have come to the conclusion—in fact, I have always held the opinion—that the proper unit for taking out crop costings is the rotation of crops rather than the individual crops. But for this particular year, if there is to be any question of fixing prices in any shape or form, it seems necessary to attempt to take out the crops by themselves—apart from taking the rotation as a unit—and to take the individual crop as the unit. It is an extremely difficult thing to say exactly what proportion of the total cost of rotation should be put against one crop and what proportion should be put against another crop.

12,184. It appears to be taken for granted that the first step in our inquiry is to find out some figures upon which the Government can fix a guaranteed minimum for the next year or two. I have tried my best

to digest this mass of material that has been put before me, and certain impressions appear to have been made on my mind. I should like your opinion as to whether these impressions are correct or not. You, I think, are the first costings expert that has been before us. First of all, these records and estimates appear to me to demonstrate the great variation of farming results not only in districts far removed from each other, but also in contiguous districts and in relation to farms with similar soils and climate?—That is so.

12,185. Taking the bearing of that on our business, if we take district by district, removed from each other, and take the best results as our basis, it appears to me clear that the areas which show poor results will go out of cultivation altogether?—I agree.

12,186. Assuming, of course, that the prices that are suggested will come into operation?—Yes.

12,187. Taking the districts with the poorest results as our basis, it is on the other hand clear that the farmer in those districts which show better results will make very big profits and that high rents will be charged for his land at the expense of the State?—Why not tax him on his profits?

12,188. That is another matter, but you will agree that that result will follow?—Yes.

12,189. Taking the other case of farms which are close together and are farmed under similar conditions, and which also show great variations it appears to me there must be some reason for those variations of which no hint is given in these returns?—You are speaking now of a particular district?

12,190. Yes. Assuming you have two farms side by side, in which you have very different results, these returns appear to me to give no hint whatever to account for the varying results?—May I point just as an example to the 1918 crops of wheat where on one farm the costs were taken out for three different kinds of soil. On the heavy soil the cost was £16 3s. per acre, and on the light soil it was only £12 3s. per acre, showing a difference of £4 per acre, so that under the same management and the same efficiency with regard to manuring, and so on, there is a difference of £4 per acre on account of the soil only. That is one factor which accounts for the difference in the results in other farms in the same district.

12,191. Would you agree with another impression which has been made upon my mind, that the personal factor has very much to do with these results?—I am very certain that the personal element is extremely important.

12,192. If we take a farm in a district giving poor results as our basis, two things appear to me to follow; first, the good farmer in that district would have big profits, and, secondly, the poor farmer for personal reasons, through not exerting himself, or through ignorance or what not, would be given a premium, as it were, on his lack of industry or lack of knowledge, or for some other reason?—I should say that the ideal would be to fix prices in such a way that the poorest class of farmers would be driven to the wall altogether.

12,193. And the poorest class of land?—The poorest class of land in many cases also would have to go the same way.

Chairman: We are much obliged to you.

(*The Witness withdrew.*)

Mr. WILLIAM EDWARD ATTENBOROUGH, N.F.U., Called and Examined.

12,194. *Chairman*: The Commission desired to cross-examine you on the figures that you have submitted to the Farmers' Union in respect of your farm, which I think is Farm No. 5* in the statement which has been submitted to us my Mr. Wyllie?—Yes.

12,195. *Mr. Anker Simmons*: Dealing with your horse labour account, according to your figures you make out the cost of keeping a horse as 7s. 3d. per day?—Yes.

12,196. I have not had time to make the calculation. Is that for the whole year or only for the 200 working days upon which your horses worked?—It is only for the 200 working days.

12,197. Charging nothing for the other days?—That is in respect of the 200 profitable working days.

12,198. I see you allow your horses 14 lbs. weight of oats in addition to 4 lbs. of bran per day?—Yes.

12,199. That strikes me as being rather a heavy allowance, is it not?—No, not in my case; I work my horses very hard.

12,200. Is yours three horse land?—Yes. What these figures are based upon is three horse land.

12,201. Practically, you allow your horses very close on three bushels of oats a week?—If you reckon it so. It is 14 lbs. per day; I have not reckoned it out in bushels.

12,202. Dealing with the cost of production of wheat, do you mean the Commission to understand that £15 19s. 4d. should be taken as a fair average cost of the production of wheat on the second course as stated here?—Those are my actual costs.

12,203. To get an average yield of 4½ quarters?—Yes, on that particular crop.

12,204. What quantity of straw would you grow there?—That varies according to the year.

12,205. Yes, but if your average yield is 4½ quarters, we might take it, I suppose, that your straw would not be less than 27 or 28 cwts.?—I could not tell you; I have never weighed my straw; we consume it all.

12,206. You never sell any straw?—No. We grow a great deal of straw on the dead fallow crop, as a rule.

12,207. Your system of farming is what we call a five field course?—Yes.

12,208. What do you do with your third course; you cannot have the whole of your third course in with clovers and seeds, can you?—Yes.

12,209. Not with clovers?—Yes.

12,210. Do you grow clovers every five years?—Yes, I have done it for 28 years. I grow a mixture. This class of land will not grow broad clover every 5 years.

12,211. You cannot grow sanfoin?—No.

12,212. Do you grow lucerne?—No.

12,213. Going back to the first crop of wheat after the bare fallow, is there no manuring there?—No, not on bare fallow.

12,214. You charge rent and rates each year?—Yes.

12,215. What about roots?—I do not grow any roots on this class of land. I occasionally grow mangolds, but they are on a separate basis altogether. This is worked absolutely separately.

12,216. What is the acreage of this field?—My total acreage of this class of land is 180

12,217. Is the remainder of your farm of a different type?—I beg your pardon, it is 180 acres heavy land and 78 acres light land.

12,218. You have not given us any figures with regard to the light land?—No.

12,219. So that practically the part of the farm with which you have given us your figures is the most expensive part in regard to its working?—I have not gone into that; this is the cost of the working of this land.

12,220. Is this an estimated cost?—No, it is actual.

12,221. When you say actual do you mean to say you keep an account as to how many days the horses were at work, and charge so much a day for the horses and so much a day for the men? When you say actual in what way is it actual?—If you notice, the number of horses is given and the number of men is given, and the amount of work done and the cost per acre. With regard to the number of working days in the case of horse labour, that of course is more or less of an estimate, but it is an estimate which if it errs at all it certainly errs on the right side; the horses certainly do no more than that.

12,222. You mean to say that for one third of the year your horses are idle?—I thought there were 365 days in the year.

* *See* Appendix No. IV.

12,223. That is so, but there are 52 of those days which are Sundays, and you do not work your horses on Sundays, do you?—Not always.

12,224. You estimate that out of the 300 working days you can only have your horses at work 200 days?—On profitable work.

12,225. That would not apply to the other part of your farm, the light land, would it?—No, it only applies to the heavy land.

12,226. So that these figures, as I said, only apply to the most expensive part of your land so far as the working of it is concerned?—That is a matter of opinion

12,227. *Mr. Overman*: This 180 acres that you have referred to is very heavy land indeed, is it not?—Yes.

12,228. There are only certain days of the year upon which you can possibly get your horses on to do it?—That is so.

12,229. You keep very accurate accounts, do you not?—Yes.

12,230. How is your valuation taken—is it taken by yourself or by a valuer?—By a valuer to whom I paid 5 guineas.

12,231. Did he value at market prices this year or at cost?—At cost.

12,232. You show a balance sheet every year?—Yes.

12,233. You do not pay income tax on double your rent, I take it?—No, I do not; I pay on my profits, and my return has been accepted by the Surveyor of Taxes.

12,234. These estimates refer to the heavy part of your land, and that only?—Yes.

12,235. They are taken as accurately as you can take them from your books?—As accurately as they can possibly be taken.

12,236. *Mr. Batchelor*: How do you enter your rent against this portion of your land? Is it the average rent of the farm or is it a higher figure or a lower figure?—It is a lower figure. Out of the 180 acres it is actual on 130 acres and on the 50 acres it is an apportioned rent to compare with the part of the heavy land.

12,237. I presume I may take it that your establishment charges, such as hedging and ditching and unprofitable work in wet weather—which, I see, you enter at £1 an acre—have been wrought out by the from accurate details, and that in your opinion the figure you give is as near as you can possibly get at it?—Yes.

12,238. The same as regards your wear and tear of implements and renewals?—Yes.

12,239. You had before you the actual details before you put these figures in?—Yes. I have the bills here, if you would like to see them.

12,240. Am I right in understanding that on those 180 acres of land which are wrought on this particular system the only dung that is applied to any crop is to the oat crop?—That is so.

12,241. And that the only artificial manure is sulphate of ammonia—1 cwt. to the second wheat crop?—After seeds.

12,242. Yes. You put the straw against the dung in each case?—Yes.

12,243. Is the whole of the straw from these crops made into the dung which is applied to the oat crop, or where does it go?—That is the whole of the dung—that is as near as it is possible to say. I do not say there is not occasionally another acre or two put on to something else, but that is as near as I can possibly get at it.

12,244. I notice, and should like to emphasise this, that you have never charged anything for interest on capital or for management?—Nothing whatever.

12,245. So that these are bare actual costs?—Bare rock bottom costs, as far as I can get at them.

12,246. You have a note with regard to your seeds, No. 2, "Assuming good quality and got well"?—Yes.

12,247. Was that made out before the hay harvest was finished?—No, after.

12,248. "Assuming good quality and got well"—would that apply to the average item £1 5s.?—Yes, it was got well this year.

12,249. It does apply to the average £1 5s.?—Yes.

12,250. May I take it, as regards the yields of wheat and oats which you give here, that now the harvest is finished these yields are what you still consider they will be?—No, they will not be so much—nothing like it.

12,251. What is that caused by?—That I cannot say. I have been through bad yields and good yields, and if you want my opinion, I think that probably one cause was the very wet spring and the dry weather afterwards. Another cause is the decrease in the fertility of the land, because it has not been anything like so well farmed since 1914.

12,252. In other words, you have taken more out of the land than you have put into it?—Yes, there has been very little put in.

12,253. So that with regard to the cost of the 1919 crops and the yields you give, these yields are really higher than what you expect the 1919 crops to turn out?—Much higher. These yields are what I consider the average yields over a period of years. I did not think that it was fair to take the excessively low yield this year and put it before this Commission as an average yield.

12,254. Still, we want it noted that, in your opinion, the yields this year will be lower?—Yes, some yields will vary from two quarters an acre up to five, in my opinion.

12,255. In the working days of your horses, which you estimate at 200 for this particular year, would the fact that there was a wet spring this year have the effect of making the working days probably less than usual?—Yes, but the estimate of the working days of the horses is taken over a number of years; it will probably be under that this year.

12,256. *Mr. Ashby*: I am afraid I am merely a novice with regard to farming and I should like to know how you arrive at an estimate of what land is two horse land or three horse land or four horse land?—If you put yourself in the place of the horse you would soon find out.

12,257. Have you found out?—Yes.

12,258. Tell me how you find out?—The difference between two and three horse land?

12,259. Yes. Do you put two horses on to ploughing three horse land?—No, you would kill them within a very short time if you did.

12,260. Do you assess it by the number of horses it takes you to plough land the first time and the second time or how?—I know what you are getting at. You are referring to the four horses in breaking up the fallows. Probably that is what you are thinking of. We plough 7 inches deep and it takes 4 horses to plough the first time. On the heavy land according to the season, it might possibly take three horses the second time and then two, but I have based this on two for ploughing after the first.

12,261. Will you look at your horse ration for a moment. It is a pretty good horse ration for the winter period, is it not?—I do not call it so; it is what we have given them.

12,262. What sort of horses are they?—Heavy cart horses.

12,263. What sort of weight—15 cwts. each?—I am no judge; possibly if you say so.

12,264. It is a heavy ration is it not?—It is the ration I use; I cannot tell you whether it is a heavy ration or a light one.

12,265. You base this statement on records, do you not?—Certainly; my corn is weighed out.

12,266. Would it not be rather more convincing as a record if you put down the total quantity of oats and seed and hay used and the total quantity of bran used?—That is exactly what I have based that estimate on.

12,267. Would one usually find that if one fed a certain quantity or knew the actual total quantities fed it divided into an exact number of lbs.?—I do not quite follow you.

12,268. Supposing you fed a ton of hay over a certain number of days in the winter and a certain numbers of quarters of oats over a certain number of days and divided the quantities by the days would they always divide exactly into lbs.? Do you always eat half a pound of beef steak for your dinner, or do you vary it?

12,269. A lb. less of oats a day will make a big difference in the total?—Some days they will eat more and some days less. That is the ration which is weighed out to my man every week, he uses that as he likes.

12,270. You do not grow any roots, do you?—Yes, a great many.

12,271–2. Not on this heavy land?—I grow mangolds on it sometimes.

12,273. Not in 1919 to which the figures relate?—No; there are no mangolds whatever on this land.

12,274. What would the horses be doing say between the 1st of May and the 1st August besides cutting these 36 acres of clover seeds?—Cleaning the fallows.

12,275. Thirty-six acres of fallows and 36 acres of clover seeds?—I am sorry to say that some of the fallows we did not get up; we had to have steam cultivation to get them up.

12,276. You have three or four months in the summer when the horses are not doing anything except turning fallows and cutting clover and hay?—Our horses never lie idle when the weather allows us to work them.

12,277. Yet you have 100 days on which they do nothing?—We always work them when it is fit to work them.

12,278. Surely these are the best days of the year for working?—Certainly.

12,279. Is this summer ration fed to the horses?—Actually—in fact we are now feeding the winter ration, and have been doing so for considerably more than a month.

12,280. With good strong cart horses weighing about 15 cwts. each, and fed well, do you actually mean to say with four horses on the plough you cannot plough more than half an acre of land a day?—Yes, they will not plough more.

12,281. There is nothing wrong with the management, is there?—Possibly. I am not supposed to be a judge of that.

12,282. Or that two good heavy well-fed horses turning fallows will not plough more than three-quarters of an acre a day. Do you not think it is possible they would plough an acre?—Possibly you might, but my men do not; there is only half an acre allowed for the first ploughing.

12,283. The wear and tear of implements runs through this statement at 10s. the acre?—Yes.

12,284. Is that based upon actual bills?—Yes.

12,285. It is rather clear it does not run into pence when you divide the bills by the number of acres?—I did not think it was worth while to go into pence in coming before a Commission of this description.

12,286. So that if it worked out at 9s. 3d. you would put down 10s.?—Certainly not: I should put down 9s.; that is how my costs are based.

12,287. You have a valuation and a careful record. What is the value of the implements per acre?—I have not gone into that.

12,288. What is the total value of the implements?—That will appear in my balance sheet.

12,289. *Mr. Green*: You say these are actual charges. In estimating the establishment charges such as hedges, ditches, unprofitable work and wet time, what principle did you go upon in differentiating the cost between the hedging and the ditching and the unprofitable work and the wet time. How did you work that out in detail?—I worked it out as closely as I possibly could having regard to the number of wet days and the unprofitable work and the amount of hedging and ditching done and so forth. There are a great many items that are not entered there, and so forth. Those are the main items as near as I can possibly get at them. I do not ask this Commission to say that £1 an acre is the actual amount, but it is as near as I can possibly get at it.

12,290. *Mr. J. M. Henderson*: These figures of yours do not cover the whole acreage of your farm?—These figures refer to the working of the 180 acres of heavy land.

12,291. You do not give us any account of the other part of your farm?—No.

12,292. You have altogether 515 acres?—Yes.

12,293. I see you charge for bird scaring 2s. 6d. an acre on this 180 acres?—Yes, now it costs me more than that.

12,294. If it costs you more why do you not put down all it costs you?—One cannot put down the actual cost of bird scaring, because it depends upon the season—it depends upon how long the corn is growing. If this Commission suggests that bird scaring is unnecessary I could suggest another remedy.

12,295. I am not suggesting anything of the kind. You get an average yield of 4½ quarters, but you do not tell us what the last crop fetched. I suppose you will show us that in your balance sheet?—The 1919 crop is not sold, but it is not 4½ quarters.

12,296. What is it?—I cannot tell you—anything from 3½.

12,297. According to your figures, if it is only 3½ quarters you will make a loss. Is that so?—Yes.

12,298. Are you one of those gentlemen who have a balance sheet to produce to us later on?—I have a balance sheet, which is in the hands of the National Farmers' Union.

12,299. You are going to hand it to them?—It has been handed to them.

12,300. *Mr. Prosser Jones*: Have you tried tractors with which to plough this land?—Yes, occasionally, when I cannot do it with horses.

12,301. It has been successful?—When the weather is absolutely perfect.

12,302. What number of horses do you keep on this farm?—Ten.

12,303. Five hundred and fifteen acres?—Two hundred and fifty-seven arable.

12,304. The horses have something to do on the rest of the farm, have they not?—A certain amount; not very much.

12,305. Is this 17s. 6d. for rent and rates typical of the rents charged in Leicestershire?—I do not know; that is my rent.

12,306. You will admit it is a low rent, will you not?—I do not admit anything; it is the market value of the land, I take it.

12,307. What number of men have you got on this farm?—I work four men and a boy to the 100 acres of arable land.

12,308. Do you know all the men that you have?—Yes.

12,309. Do you see them frequently?—I have never had a foreman yet since I have been in business; I have been in business for 28 years.

12,310. How do you find these men are performing their work at the present time?—Very well. I have no fault to find with them, with this exception, that the skilled men are getting scarcer.

12,311. Do they live in cottages of their own or do they live in the farm house?—Three of them live in cottages on my farm, the rest come from adjoining villages.

12,312. None of them come from your house?—No.

12,313. *Mr. Langford*: This is very heavy land, is it not?—Yes, heavy three horse land.

12,314. It is absolutely necessary to fallow it one year in each course of five years?—Absolutely, in my opinion.

12,315. So that the profits derived from the four succeeding crops have to be averaged over the five years?—Yes.

12,316. In your first crop of wheat after fallow, assuming that you got 4½ quarters of wheat and sold that wheat at 80s. a quarter, which, of course, is higher than the price obtainable to-day, I work it out that you would get a profit of £2 0s. 8d. and the straw on that year's crop?—Yes.

12,317. Coming along to the next course of seeds, you say you grow an average crop of 25 cwt. to the acre?—Yes.

12,318. You could sell that at £8 a ton and you would make a profit of £2 7s. 4d. on that crop. Coming along to the next crop of wheat, the average falls to 32 bushels in the fourth course, I see?—Yes.

12,319. If you sold that at 80s. a quarter, you would make a profit of £1 7s. 2d. and the straw on that year's working?—Yes.

12,320. In the last course, oats, if you sold your oats at 56s. a quarter, you would make a profit of 15s. 10d. and the straw in that particular year?—Yes.

12,321. If you add four years' profits together, they come to £6 12s., and the average over the five years would be £1 6s. 5d. an acre?—Yes.

12,322. Do you agree with me that in order to be of any benefit to you on your heavy land, the guarantee as regards wheat would need to be not less than 80s. a quarter to be of any service to you?—Certainly.

12,323. It seems as though the guarantee on oats would need to be not less than 60s. a quarter?—Certainly.

12,324. In fact, it ought to be more, because your profit on oats is the lowest profit in the whole five courses?—60s. as a minimum guarantee.

12,325. And you would like a free market, I suppose, above that?—Absolutely.

12,326. I think you said, in answer to a Commissioner, that you were one of those few farmers who pay income tax on your actual profits?—Yes.

12,327. You have your accounts audited and you pay income tax upon the actual results ascertained by that method?—I have done for 1918.

12,328. When the proper time comes, you are prepared to put in your balance sheet?—Certainly.

12,329. And to come back here again to be questioned upon it?—Certainly.

12,330. *Mr. J. M. Henderson*: For the whole farm?—For the whole farm.

12,331. *Mr. Lennard*: I understood you to say just now that you considered an 80s. guarantee for wheat would be necessary on your class of land?—That is a question which I do not care twopence about, but if it is necessary for wheat to be grown on that land, a guarantee of less than 80s. would be of no use whatever.

12,332. Is the land of your farm, or the particular fields you have been dealing with, average quality land?—It is the average quality of the heavy land on the farm.

12,333. On the heavy land of your farm you consider that wheat is an unremunerative proposition, unless there is a minimum guarantee of 80s.?—Certainly.

12,334. You also said, in answer to Mr. Langford just now, that you desired a free market above that price?—Yes, certainly.

12,335. I gather, then, that you expect that the world's price of wheat will sometimes, or perhaps frequently, be above 80s.?—It may or it may not; I have no opinion with regard to that.

12,336. You said just now that it was important to have a free market with regard to your wheat?—Certainly.

12,337. How would the free market help you if the world's price of wheat was not usually or frequently greater than 80s.?—I am afraid, Mr. Chairman, we are getting away from costs.

Chairman: I did not stop the question for the reason that in answer to Mr. Langford you said you favoured a guarantee of 80s. and that in addition you also wanted the play of the market. It necessarily follows from your answers to Mr. Langford that Mr. Lennard is within his rights in asking you why you want the free play of the market. I should have stopped Mr. Langford. It was my own fault and I apologise for not doing so. I am afraid, Mr. Lennard, it is no use continuing the questions in the circumstances.

Witness: May I say I do not wish a guarantee of any price whatever; I wish a free market, but if it is in the interests of the country that corn should be grown on that class of land, then I say it cannot be grown at a profit under 80s. I want to make that very clear.

12,338. *Mr. Nicholls*: I am not quite clear about the arrangement you have for dealing out corn to the horsemen. I suppose you have a regular horseman?—Yes.

12,339. Your custom is at the end of the week to allot him out so much per head per horse whether they are at work or not, I suppose?—That is so.

12,340. So that really the estimate you put in here is based upon what you actually dole out to the horseman?—That is so.

12,341. He would be in a very bad temper on the Saturday if you did not dole him out what he expected?—That is so.

12,342. The horseman is very keen about his allotment of corn for his horses?—Yes.

12,343. With regard to these working days, I am a little puzzled about them. I do not think that you want us to believe that 200 working days for a horse applies to your farm as a whole?—No.

12,344. There are many days on which the horses are not working on the stiff land, but are working on other land?—That is so.

12,345. So that really they are working more than 200 days on the average?—If I were giving an estimate for the whole of the arable land I should increase those working days.

12,346. I was puzzled because yours is the lowest with the exception of one that I have traced amongst all our lists. They go up to 290 in Oxford, 240 in Salop, 290 in Dorset, 260 in Somerset, and so on. There is only one other county where they show the number of working days as low as 200 and your estimate is also the highest per acre as regards the cost per day, 7s. 3d. They run 6s. and 6s. 6d.; there are several at 7s., but there is not another one that I have found as high as 7s. 3d. A point was raised, too, about bird scaring. I am rather interested in that because I have had some. I cannot find out the size of these fields, but somebody seemed to suggest that it was really 2s. 6d. an acre on all this corn growing land?—It is 2s. 6d. an acre on the actual crop.

12,347. Are you troubled much with game in your district?—We are smothered with rooks; it is the rooks and wood pigeons that do the mischief.

12,348. They shoot all the pheasants and partridges I suppose?—The game on my farm is let; I do not have the shooting.

12,349. Does that really account for the high figure of 2s. 6d. an acre for scaring birds, because it is rather high?—Do you call it a high figure?

12,350. Yes. I suppose it is a boy that does it, and occasionally a girl?—Sometimes a man, because we cannot get the boys.

12,351. Are boys frightened of rooks in your part of the country. This is the first time I have heard of a man being engaged to drive off rooks. I should have thought it would be fine sport for a boy. In your district is bird scaring a full time job?—For boys certainly.

12,352. They always made me do something else?—So do I. If there is any stone-picking-up to do they do that, but it is very rarely you can combine the two jobs.

12,353. I suppose there is no doubt, like most other farmers, you do combine the two jobs when there is a chance?—Yes.

12,354. You would not let a man go and waste the whole of his time bird scaring?—No, certainly not.

12,355. So that it does generally happen that the person, whoever he is, who is looking after the bird scaring is doing something else at the same time?—Not with the boys.

12,356. No, but you said you could not get boys?—I say when we cannot get boys. It is always a matter of convenience.

12,357. I was suspicious a little because the rent of your farm looks rather low, taking the whole of it, and it did indicate to me that there would be a good deal of trouble with game and rooks. I mean where there are rooks there is generally something else about as well, and that would be one thing which would hamper a farmer in his endeavour?—The game has nothing to do with the scaring.

12,358. No, I know, but is it not a handicap to a farmer in cereal growing when he has got a farm on which somebody else has the shooting?—It depends on the man who has the shooting absolutely; personally I have had no trouble whatever.

12,359. Do you mean honestly to say that you do not mind. Would you not prefer to have a farm where there was no game if you were really out for cereal growing?—Certainly.

12,360. I do not mean to say that you have trouble with the shooting tenant because we do generally arrange that, but is it not really a handicap to the farmer when one farm is let for two purposes?—As a general principle, yes. Unless the occupier lets the shooting himself I agree with you.

12,361. It does hinder the best results in cereal growing?—I should say as a general principle possibly it might do. I would not like to commit myself at all, because I have never had a farm which was infested with game, although I have heard of them.

12,362. If the shooting on a farm is worth letting to a tenant there must be something there?—With regard to my farm there are a great many woods and pheasants which were reared before the war in the woods. My experience has been that when they fed the pheasants in the woods we were far less bothered with them.

12,363. *Mr. Parker*: With regard to labour costs have you charged that at one rate up to 30th May and at another rate after?—Yes. You will notice with regard to the seed crop the labour is charged on the old price.

12,364. On the 30s.?—Yes.

12,365. Then the figures are not quite accurate, are they?—Yes, they are absolutely accurate. The seeds are charged at the actual cost and also the labour.

12,366. *Mr. Smith*: I think you admitted, in reply to Mr. Nicholls, that these costs per acre are rather high for this second course—£16 an acre?—No, I did not admit that, because I did not know. Mr. Nicholls said so, but I have no means of knowing.

12,367. Would you not agree that £16 an acre represents a fairly high cost for cultivating wheat?—I have no means of knowing that; those are my costs.

12,368. Is it to be assumed that these are not questions that farmers discuss amongst themselves?—Certainly, they talk about them.

12,369. I do not know whether you are prepared to admit that farmers do exchange opinions on these subjects amongst themselves and that in that way you get to know something about costs generally?—I am afraid I am rather sceptical with regard to statements made by anybody unless they bring me facts and figures to prove them.

12,370. Especially farmers?—No, any class of man.

12,371. Would these different operations set out here represent the full cultivation?—They represent the full cultivation of the course as it is given.

12,372. You stated that very little had been put into the land during the war?—Yes.

12,373. What actually do you mean by that?—I have used far less cakes. My custom pre-war was to fork the whole of my stubbles, but since the war we have forked nothing and we have also cross-cropped, and the capability of the land has, therefore, gone down to a great extent.

12,374. You admit here that this represented the full number of operations of cultivation and you also admitted that the whole of your straw went back on to your land in the form of manure?—Certainly.

12,375. I suggest that that does not look as though there had been very little put into the land; it looks as though the full amount had been put into it?—Everything that has been grown has been put in, but once you stop your cake feeding you soon decrease your corn yield.

12,376. Apart from that, the full cultivation has been maintained?—No, because there has been no hand labour put in.

12,377. When I asked you whether this represented the full cultivation, you said yes?—Yes, so far as the horse labour is concerned, but the farm has deteriorated because we have not been able to do the forking and keep it in the state it was in pre-war.

12,378. Do you suggest that these costs in normal times would be added to?—Certainly, on to-day's wages. If I had to farm my land as I farmed it prior to 1914 on the now existing minimum rates of wage, it would cost infinitely more.

12,379. Your first statement would not be correct that this represents the full operations of cultivation?—It represents the full operations of cultivation at the present time.

12,380. Yes, but that was not the question I asked you. I asked you if this represented the full operations of cultivation, and you said yes. You said that all your straw had gone back in the form of manure, and if this represented the full operations of cultivation, I could not see how the land had deteriorated?—It has deteriorated, I say, through the want of manual labour not having been put in and through the absence of cake feeding.

12,381. Could you tell us what you estimate the deterioration per acre at?—It is very difficult to say—certainly not less than £5 an acre.

12,382. That is a very high figure, is it not?—I do not think so; that is my estimate.

12,383. Do you suggest that through the absence of the hand operations and the absence of cake feeding which you speak of your land has got deteriorated to the extent of £5 an acre?—And the cross cropping. During the war we took a third white straw crop which we ought not to have done. We took the advice of the powers that be against our own judgment with the consequence now that we have got to make up for it.

12,384. Would this deterioration of the land be reflected in the crops?—Certainly.

12,385. Can you give us your total yield per acre from this land in 1918?—I have not got those figures with me; I thought I had.

12,386. The yield was very good last year, was it not?—No, it was not. My dead fallow wheat yielded four quarters per acre last year. This 4½ quarters is the average.

12,387. Do you suggest that last year's wheat crop was not a good one?—Certainly not with me.

12,388. It is remarkable how farmers differ in their opinions, is it not?—My barley crop was a good one last year, but not the wheat.

(*The Witness withdrew.*)

Mr. J. COSSINS, called and examined.

12,389. *Chairman*: I need not refer you to the costs of production on your farm which have been presented to the Commission in a return prepared by Mr. Wyllie on behalf of the national Farmers' Union. The members of the Commission desire to cross-examine you upon the items in your cost account.*

12,390. *Mr. Edwards*: Is your farm typical of Dorsetshire or typical of your neighbourhood?—It is typical of the neighbourhood.

12,391. All large farms of this kind?—All large farms on the hills of Dorset.

12,392. Do you consider that your land is really suitable for the growing of wheat and cereals?—It has been since my remembrance.

12,393. Are these estimates that are given here the actual records of the working of your farm?—They are records of the accounts that we keep.

12,394. Have you been in the habit of getting separate accounts for various crops as they are down here. We have before us No. 19 the cost per acre of growing a crop of wheat. That is followed by the cost of growing a crop of barley and so forth. Have you been in the habit of keeping accounts according to this method?—Yes.

12,395. Do you think that they lead you to a true conclusion as to the final result of your farming?—As far as my experience goes they do. I have followed the same practice for many years.

12,396. To take first your cost of horse labour, you say as regards the shoeing of horses "four sets new shoes per horse per annum, 9s."?—That is for 1918 the 9s.

12,397. The present price, 1919, is 10s.?—Yes. The price varies. Just recently it has gone up another 1s. 6d. a set.

* *See* Appendix No. IV., Farm No. 30.

12,398. That would make it 11s. 6d.?—Yes, it would be 11s. 6d. for this year 1919.

12,399. I sent a horse to the smithy the other day to be shod and my boy said to me: "What do you think they are going to charge you"? I said: "About 15s." "No," he said, "22s., according to the size of the shoe"?—Yes, I quite believe that.

12,400. You mention here "Share of rent, rates, insurance, &c." What amount of insurance is included there? The insurance of horses.

12,401. Against fire?—Yes.

12,402. Against fire only?—Yes.

12,403. Have you never been in the habit of insuring against deaths in horses?—No, I have in-foal mares, but that is not mentioned here.

12,404. Taking the wheat crop, you say that you have a large number of horses—20 working cart horses on the farm?—Yes.

12,405. Still you have down here "Steam ploughing and pressing"?—Yes.

12,406. Have you steam tackle on your farm?—We hire it.

12,407. Your 20 working horses are not able to tackle the work?—We are cultivating 800 acres of arable land.

12,408. Unless you hire steam tackle the 20 horses would not be equal to the work?—The wheat is grown after two years lay, and, therefore, it is beyond the power of the horses to plough that land efficiently for the growth of the wheat. We have, therefore, to use a steam plough to plough it up to a depth of 7 inches, and press with a heavy press, it is generally done in August.

12,409. You say threshing at one rick per day. What does that mean?—We put up our ricks at a convenient size, so that we can get a rick threshed out in a day with our tackle.

12,410. How much acreage is included in each rick?—It depends on the straw crop of that wheat, but on an average we put from 10 to 12 acres in a rick.

12,411. You are able to thresh that amount per day?—Yes.

12,412. With nine men?—Yes.

12,413. Does that include the drivers of the threshing machine?—Yes. I can explain it if you like. During the last two years and during this year we have threshed by the tractor which we now use. That saves a man; it does not require an attendant, and, therefore, the man is able to look after the sacks. If you thresh by steam you must have another man to attend to the steam engine alone.

12,414. Then you say that the hire of sacks per acre only amounts to 8d.?—1d. per sack is what we are charged now by the merchant for the hire of the sacks.

12,415. You are in a very fortunate position as compared with the position I am in in that respect; they charge me very much more than that for sacks at the present time?—We do not keep them long—only a few days.

12,416. Have you grown more wheat or cereals on your farm during war time than you did previously?—Yes.

12,417. Have you been able to obtain such good crops during the war as you did previously on the average of the four years?—About the same. 1918 was exceptionally good.

12,418. Do you consider that your land is in as good a state on the whole now as it was in, say, 1914?—No, not so good.

12,419. In what respect has it deteriorated?—There has been a larger area of corn grown, and, therefore, we have been obliged to grow two straw crops following, which deteriorates the land and gets it to a certain extent foul.

12,420. *Mr. Duncan*: Can you tell me what principle you adopted in charging your interest on capital in the various accounts?—It is explained, I think. The average value of the horses is £62 10s. each, and all the items are here: wheat, £93 15s.; barley, £25 3s., and so on.

12,421. On your wheat crop No. 19 your charge there is 5 per cent. on the total cost of the crop, is it?—Yes.

12,422. Is that followed throughout in your charges?—Yes, as near as I can estimate it the interest is charged on the capital of each of these commodities.

12,423. Can you tell me how much the interest on the capital over the whole farm would amount to?—£617.

12,424. That works out at 5 per cent. on the capital actually in the farm?—Yes, estimated at £12,000 invested.

12,425. Is that the figure of the valuation of the farm at the end of the year?—Yes.

12,426. Is that the figure which appears in your balance sheet?—I have not got my balance sheets with me.

12,427. No, but when you do make up your balance sheet is that the figure which appears?—The invested capital varies from year to year.

12,428. Exactly, but that is the figure which appears for this year, I suppose?—That is so.

12,429. What does the total sum for management amount to on the whole of the farm?—£347 5s.

12,430. In this sheep account No. 4, what number of sheep and lambs were sold. You give the total figure at £1,834 19s.?—Yes, that was the total of receipts from sheep sold during that year.

12,431. Can you give us the numbers sold?—I am afraid I cannot, exactly. I can give them to you approximately. In July we sell off our draft ewes; then we sell our wether lambs in September, or if we have food to carry them through we grow them into mutton and send them to market.

12,432. What number of lambs had you in 1918-19?—640 -about a lamb to a ewe.

12,433. Do you reckon it is a normal thing for you to lose on your sheep account?—Yes.

12,434. How long has that been going on?—The whole of my time of farming.

12,435. Has there been any improvement during the war period?—Of course, the figures are much greater.

12,436. You mean you are losing more now?—On account of the figures being greater you see.

12,437. Are you actually losing more money on your sheep account now than you did prior to the war?—Yes.

12,438. Is that common in your district?—Yes, where large flocks are kept. The sheep are always in the hurdles for 365 nights of the year. They are fertilising the arable.

12,439. *Mr. Edwards*: You have been through these figures and you supplied us with the cost of production per acre of the individual crops. Would you, as a farmer of wide experience, make a suggestion to the Commission as to what minimum price you would require for the growing of these crops on your farm?—That is a very important question. I have had a good deal of experience for 40 years, and I have grown a great deal of corn. I think under the present conditions of farming I, for instance, cannot grow wheat at the present day at less than 80s. a quarter.

12,440. What about barley—do you grow barley?—I grow from 40 to 60 acres generally.

12,441. Would you venture to give a figure as regards barley?—I should say 70s.

12,442. And oats? 55s.—those are under present day conditions.

12,443. In order to be quite clear, what weight per quarter do you mean in the various crops?—Wheat, 504 lbs.; barley, 448 lbs.; and oats, 336 lbs.

12,444. *Mr. Ashby*: I have been looking at your winter ration, particularly for horses. What is the chaff there?—Oat straw chaff, chiefly.

12,445. I take it that is about a cwt. a week?—Yes. I may say that the wheat dust is mixed with the oat straw chaff generally. When we thresh all the wheat dust is collected and taken great care of and the oat straw chaff mixed with it.

12,446. This chaff is really the wheat chaff from the thresher mixed with oat chaff straw?—Yes.

12,447. Should I be right in assuming that this ration of bran runs to nearly 2 lbs. a day, or something between 12 and 14 lbs. a week?—There is very little bran, I think.

12,448. You put bran down at 1s. 6d. per week?—We use a little bran chiefly for health's sake—mangolds are used chiefly.

12,449. What sort of horses are these?—Shire bred horses.

12,450. Pedigree?—Some are pedigree and some are not.

12,451. Is it heavy ploughing?—Three horse land. We use three horses with nearly every implement.

12,452. Does it not strike you as rather a heavy ration?—I do not think so. You see our horses never get a bit of hay; they only have straw in the racks.

12,453. They get 16 lbs. of oats, 21 lbs. of chaff and 2 lbs. of bran and mangolds?—The mangolds vary; there are very little mangolds in the Autumn; it increases in the spring.

12,454. It does not strike you as a heavy ration? It is what we have been used to for many years. The oats are generally bruised and measured out in the ration; that would make a difference.

12,455. It keeps the horses in very good condition, does it not?—No, nothing extra.

12,456. Of course, they work a lot of days?—Yes, we lose very little time with our horses; we cannot afford to let them lose time.

12,457. I have been looking at your sheep account. It is apparently very similar to all sheep accounts we get from these counties. Have you any general explanation to give as to the deficit shown on the sheep accounts in Dorsetshire and Hampshire?—You see everything has to be grown for the sheep by cultivation, and the horses—all our catch crops and all our roots. They are never on pasture land and therefore the expense and the looking after them, and the hurdles, and everything else, is very heavy. But we are bound to keep them because we cannot grow corn without them.

12,458. I understand that. Should I be far wrong in saying that in feeding tegs on roots in the winter they are quite frequently kept longer than they ought to be?—We are obliged to give our lambing ewes cake directly they lay a lamb. Is that the answer you wished?

12,459. I am afraid you misunderstood me. Should I be right in assuming that when you are feeding tegs—I do not know if you understand that term?—Yes, I know what tegs are.

12,460. When you are feeding tegs on roots in the winter they are quite frequently kept longer than they ought to be, and they are somewhat overfed on the roots?—You see we have nothing else to depend upon for our ewe lambs. We have 250 to 300 ewe lambs to keep to replenish the flock each year, and they have to be kept exclusively on roots and hay or chaff until the green crops come in the spring.

12,461. Is it true that sheep are becoming unpopular in your district?—Yes, for various reasons I could give if you wish to know.

12,462. Yes, I should like to hear them?—I may say on account of the Government wish—which we have complied with—that we should grow a great deal more corn the number of sheep has had to be reduced. That is one reason, and in many cases flock masters have sold their tegs off as mutton to obtain the high price and enable them more easily to grow more corn.

12,463. If you are going to reduce your sheep as a permanent policy how are you going to work this type of land?—I should not think of doing it, I should not reduce my sheep flock by one. If you intend to keep on farming I am quite sure in my own mind that that is a wrong thing to do, but if I were giving up in two years' time I should soon get rid of my sheep.

12,464. Do I understand that on your behalf at some time or other a balance sheet is going to be produced respecting this farm?—If it is necessary I can produce balance sheets to the Farmers' Union.

12,465. You have not done so yet?—I have not done so. I have not been asked.

12,466. Looking at these accounts as they stand with the rather high cost of milk and the big loss on the sheep, there would be perhaps a total loss on the farm. Would the balance sheets show that?—I cannot say that there is a loss on the milk.

12,467. I beg your pardon, I am wrong. Could you give us an idea of what your yield of milk per cow is?—I do not keep records. I can give you the total amount of gallons, which you have before you, for the 50 cows.

12,468. This account does not quite cover a whole year, does it?—Yes, five months summer and seven months winter.

12,468A. *Mr. Batchelor*: I notice that your yields of wheat and barley for the 1918 crop are considerably over the average of the past seven years. Had you a good crop in 1918?—We had.

12,469. What is your 1919 crop like?—Compared with 1918?

12,470. Yes?—One-fourth less on wheat, one-third less on barley.

12,471. Will your 1919 crop be even up to the average which you give here of the past seven years?—No.

12,472. It will be even less than the average?—Yes.

12,473. In view of the deficits shown on the sheep account do you consider that you have charged enough against the cereal crops in respect of the manurial value from the sheep?—I put it down very low. I have put it down at £200, but it is an estimate, it is impossible to tell.

12,474. As regards that £200 I notice you put £1 10s. per acre against the barley?—The manurial value?

12,475. Yes, from the sheep?—I may say that barley is not always grown after sheep; it is grown after wheat.

12,476. This is after wheat, catch crop, and roots?—Yes, there are three courses of catch crops after wheat.

12,477. In each case you put in a charge for management as well as interest?—Yes.

12,478. The number of working days in the case of your horses is 290?—Yes.

12,479. Is that the actual number of days for the year 1918-1919?—Yes, as near as we can get it, leaving out wet days or part wet days. There is always work to be done with our horses as soon as it stops raining, and we can also go on cultivating our land as soon as it stops raining, there is so much work to be done in manuring, carting, and so on.

12,480. *Mr. Rea*: You allow the value of the manure to stand against the straw, I take it?—Yes. I can explain that if you wish.

12,481. No, I think it is quite plain. I just wanted to be sure that you did so. You do not make any charge for the manure, and you make no credit for the straw; you simply let one stand against the other?—Yes.

12,482. In your wheat No. 19 account you have "Crops of previous three years, wheat, clover, hay." Does that mean that you let your seeds lie for two years?—Yes.

12,483. Do you take the hay off the first or the second?—The first.

12,484. So that it is really wheat, hay, pasture, I suppose?—Yes. You see the sheep are on these clovers and the aftermath after the hay is cleared. The second year they are lambed on it and grazed and then it is manured over with farmyard manure, and then it goes under wheat.

12,485. They graze on it until it is ploughed up?—Yes.

12,486. Is 18s. an acre for steam ploughing and pressing the price you paid?—That was the price we paid in 1918.

12,487. That seems rather low, does it not?—You would have to pay a good deal more now?—We have to pay 21s. now.

12,488. Harvesting 12 acres per day, that is a big return?—I may explain that our fields are very large, the smallest field I have is 25 acres. They go up to 80 acres, and with a 6 feet binder we can easily cut 12 acres a day. We have two three horse shifts, and the horses and the machine never stop from morning to night. We are very favourably placed with regard to harvesting, having such large fields.

12,489. This loss on sheep seems to be a serious matter?—It is a very serious matter indeed.

12,490. If you cannot do something to diminish that, does it not seem almost impossible to carry on?—Yes, but if we abandoned the sheep we consider our farm would be useless for growing corn in two years.

12,491. You would have to do away with corn growing altogether?—Yes, we could not do it.

12,492. Your land will not grow corn unless it is trodden by the sheep and fertilised by the sheep?—Yes, all the year round.

12,493. It looks to be a very risky and uncertain business on the face of it?—Yes, but it is quite necessary.

12,494. Do you think you get back the direct loss on the sheep in the increase of crop?—It is the only way. Of course, the wool this year will help the sheep; there would be a much greater deficit if we had not a good price for wool this year. It has gone up more than 100 per cent. since the controls were taken off the wool.

12,495. Yes, without that it would have been much worse?—Yes.

12,496. What I was rather wondering was if this result has not a tendency to force farmers out of cereal cultivation?—They have been practising it with the help of strong fertilisers, sulphate of ammonia, nitrate of soda, and so on, but they are only a stimulant, in my experience they do not last long.

12,497. That would not keep the land permanently in a good state?—No, nothing will do it like the sheeps' feet.

12,498. I agree. The danger of the position seems to be that farmers may get frightened of it unless they have something really substantial to encourage them to grow corn?—Yes, I quite agree.

12,499. Do you think without a guarantee they would or would not carry on corn growing?—It is a difficult question. I do not think they would.

12,500. It is necessary to give them some security?—We cannot make as much of our sheep as we could because there is a flat rate on mutton. We graze our best lambs about 12 or 13 lbs. a quarter, and if we take them into the market we only get 1s. 2d., whereas for a great fat ram or a heavy ewe we get just the same. We used to look to our lambs to bring us in the money.

12,501. Yes, but have not we to consider that in the future there is a possibility that we may have to take even less than that?—I do not see how it is to be done.

12,502. *Dr. Douglas*: Did I understand you to describe your land as three horse land?—Yes.

12,503. It is described in the note on your farm in the evidence put before us as light loam on chalk. Would that ordinarily be the character of three horse land?—Yes, light loam on chalk. There is one item charged against the cultivation of mangolds where two horses were used, but that was ploughed up to an extra depth in the winter, and a large quantity of farmyard manure ploughed in which could not be done with a double plough.

12,504. As to your sheep account I see that you have a considerable outlay on food for the sheep. Apart from green crop there seems to be about £1,100 worth of concentrated feeding?—Yes.

12,505. I think you only allow £200 for the manurial residue of that, and of all the green crop together. Is that a sufficient allowance? What do you base it upon? I just want to know how you get at it?—After you have taken your wheat crop after two years' lay considerable money has to be spent in cleaning the land to prepare for your catch crops. We grow three catch crops in two years. Therefore, after exhausting the land with two years' clover and then a crop of wheat followed by a crop of barley we are obliged to grow three catch crops in two years and replenish that land with the sheep the whole time in order to come on to corn again.

12,506. Yes, but my point is how you get at £200 as the total value of the manured residue of your sheep feeding?—That was an estimate that we put it at.

12,507. How do you estimate it; what is your method, your base?—The value of the crop is grown on the land, it is all fed on the land. If a crop is grown on the land, as the sheep consume it they return that crop to the land in the shape of manure.

12,508. What about the artificial feeding in addition to the crop consumed on the land?—Do you mean cake?

12,509. Cake and oats and hay. You have £632 10s. for cake, peas and beans, and £182 10s. for oats, and £320 for hay. Is there no manurial residue from these?—Oh, yes.

12,510. Is that in the £200?—Yes.

12,511. Where is it in the £200?—The manurial residue from these I suggest to you will in itself be more than £200 without anything for your crop?—That is the result of my experience; I do not think I can put it at more.

12,512. That conflicts, does it not, with the usual view of the matter. I put it to you that if you were leaving your farm you would claim a good deal more than that in respect of improvements through feeding on the land?—More than the £200 for the manurial value of the sheep.

12,513. Yes, I am sure you would be advised to claim a good deal more than that for all that feeding stuff consumed on the land. My point is that more ought to be credited to the sheep and more charged against the arable crop in respect of that. Have you anything to say with regard to it in explanation?—No.

12,514. Did you consider the point?—Oh, yes.

12,515. Do you observe Mr. Wyllie's note on the subject? I take it to be his note?—Yes, it is Mr. Wyllie's note at the end of the sheep account.

12,516. He says: "£968 2s. must be carried by succeeding corn crops"? It is explained in a great way with regard to the small amount which I have put for the growing of the turnips. You observe the cost of growing roots is only £4 an acre—turnip, rape, and so on.

12,517. Is that how you get at your £200?—If we put the manurial value of the sheep at more than £200 the cost of growing the roots must be materially more.

12,518. The manurial value of the residues from sheep feeding is a cost not against the root crop, but against the succeeding crop, is it not?—The following corn crop.

12,519. Yes?—Of course, you see it depends a great deal with regard to the manurial value of the sheep upon what kind of a crop you have got to feed off with those sheep. In this particular year a great acreage of the roots was very poor indeed and a larger breadth had to be given every day; therefore, the manurial value was consequently much less.

12,520. Yes, but the manurial value of the artificial feeding stuffs for the concentrated feeding would remain notwithstanding. I put it to you that you have not allowed nearly enough for the manurial value of your sheep feeding and that, therefore, you have not charged enough in respect of that against the succeeding crops?—That may be so.

12,521. Do you agree?—We reckon the manurial value of feeding stuffs to be about one-sixth of the value that we give for them.

12,522. I do not think that is a very generally accepted basis, but if you take that it would still be a very much larger amount than your £200 without allowing anything whatever for the consumption of your root crop. You agree that there is an error there?—There may be a slight difficiency. It is an estimate that we thought a great deal about. It was estimated at £200 after a great deal of consideration.

12,523. Yes, but you do not seem to have considered the manurial value of the feeding stuffs?—We do not in our county consider that very much because it is absorbed by the animal.

12,524. *Mr. Smith*: Could you tell me what this item of depreciation "Two colts at £80" means. Does that mean that you lost two colts?—No.

12,525. What does it exactly mean?—To obtain the depreciation on the horses you mean?

12,526. Yes?—The system is this: on an average we put two colts in the team every year sometimes three—and these colts this year were valued at £80 each. The depreciation of the horses I think you will see is £8 each horse.

12,527. What would you consider the average value of your horses to be?—In that particular year they

varied considerably. I think the average was about £40 to £45 apiece. You can see by the valuation of the horses if you analyse it.

12,528. Have you taken the value of the horses at the average market value of the horses?—Yes.

12,529. This item "Interest on capital value horses, colts, &c., (28) £1,600" represents their present market value?—That represents their market value in that year; they would have made that money if I had sold them.

12,530. Therefore, you have allowed for interest on that full amount as part of the cost of your horses?—Yes.

12,531. In regard to your wheat, if this figure of cost £14 5s. 4d. is to remain your average cost, and your average yield does not go up, on last year's prices you would be farming at a loss, would you not?—Not on the wheat.

12,532. Last year you had a yield much above the average?—Thirty-four bushels per acre.

12,533. Yes, but your average is 28?—Yes, that is the average.

12,534. On your average yield you would show a loss?—At the controlled price of wheat I think we should.

12,535. And the same as regards barley?—The same as regards barley at the controlled price, but of course, we get more than that.

12,536. Therefore, last year was a very good year for you in the case of both wheat and barley?—It was above the average.

12,537. Would it be true to say on these figures you have given us that you would have to maintain that yield in order to get a profit on your wheat and barley?—I think these prices would be much higher at the present cost of production. 1919 would be much more than 1918. The cost of production of wheat in 1919 would considerably exceed the cost in 1918.

12,538. Therefore, it does not look as though there is going to be much profit on the wheat and barley?—No. That was my reason for stating the price of 80s. a quarter.

12,539. Have you been making a profit on the farm?—We have been making a profit during the last three years.

12,540. Is that because your yield of wheat and barley has been high during that time?—That would be partly the reason.

12,541. It would have to be much above your average, would it not?—Yes.

12,542. Because you have a deficit of £786 on your sheep which you would have to wipe off before you show a profit?—Yes.

12,543. *Mr. Nicholls*: I was not quite clear about your three-horse land. Do you use three horses to a single furrow in the ordinary way?—No, never three horses, but for two furrows always. Perhaps in stating three-horse land, you took it as one furrow; but it is two furrows.

12,544. My idea of three-horse land is three horses for a single furrow?—Yes.

12,545. But that is not yours?—No, that is not mine.

12,546. I mean that could not really be considered heavy land?—No, it is light land.

12,547. That alters the whole complexion of it?—If I led you into a mistake with regard to three-horse land, I meant we use nearly all the implements with three horses, double ploughs, cultivators, drills, drags, binders, and everything except the mowing machine.

12,548. That clears the position on that point. How far do you have to carry your milk to the station?—Four miles six days a week and eight miles on Sundays.

12,549. Because I notice you have down 30s. a week for horse and float, and light, &c., £1?—Not £1 a week; the 30s. includes the horse, the harness and the float per week.

12,550. That is right. Then is the light an additional £1 or is it £1 for the driver. It is under the heading of "Cost of production of milk from April, 1918, to April, 1919." Is that £1 a week?—No that is for the seven months.

12,551. That of course wants amplifying, does not it?—Yes. If you work it out I think £57 5s. comes all right.

12,552. Then the week day for drivers is 1s. That is proportionate for the part of the day he is occupied in doing that?—I might explain that may be considered very low; but as a matter of fact the milk is delivered by a woman, and has been for the last five years, and she undertakes the driving of the milk to the station at 1s., and 2s. on Sundays.

12,553. But you have her down under the item of "Labour, two girls, 23s. a week." She is not one of those girls, is she?—No.

12,554. Do those girls live in?—No

12,555. Are they daughters of some of the farm workers?—Yes.

12,556. And you pay the men the 35s., which was the scale then in 1918?—Yes.

12,557. And the girls 22s.?—Yes.

12,558. And 4s. for the Sunday?—Yes. This is the winter months we are referring to. Those girls were helping then to clean out and prepare and feed the cows and so on. Their time is fully taken up.

12,559. There is one other very familiar item that comes in some of these, I do not notice it in yours under "Cereal Growing." You have not any item down for bird-scaring. Are there any in your district?—I think you make a little mistake. I have got down bird-scaring on barley; and I can very soon explain to you a system for bird-scaring on wheat. We never put a man or anybody to scare birds off wheat because we always use black cotton and we never get any trouble.

12,560. There is no cost down for cotton?—It is a very minimum cost. We cotton all our wheat for 15s. or £1.

12,561. *Mr. Lennard*: There seems to be some uncertainty about this term (three-horse land). I understand you mean by it land that you can plough with a double furrow plough?—Yes.

12,562. By two-horse land, what do you understand?—By two-horse land I should say two horses in the single plough.

12,563. So that by two-horse land you really mean land which costs more to plough than three-horse land?—Yes.

12,564. *Mr. Langford*: You said just now in answer to a question that you thought the guarantee to be of service to yourself ought to be 80s. per quarter on wheat?—That is the conclusion I have come to since I have been in this room.

12,565. That is assuming that the costs of production are no higher than they are to-day?—No higher than they were in 1918.

12,566. Is it your opinion that to create confidence in the farmer, a guarantee must be given over a number of years, or do you think it is only necessary to give it from year to year?—Under the present conditions I should say over a number of years.

12,567. And not necessarily 80s; but to rise or fall upon the cost of production?—That is so.

12,568. *Mr. Prosser Jones*: You farm 1,350 acres, I think?—Yes.

12,569. Is that typical of the sizes of farms in this county?—It is rather more than the average in our county; but the farms are very large in the neighbourhood around which I live.

12,570. This is above the average, is it?—It is above the average, but some are more.

12,571. Is it more profitable to work these large farms or to work smaller ones?—I consider it much more profitable to farm a large one for this reason, because we have our full staff to do all the work of the farm. We have not to hire.

12,572. Do you get a better yield per acre?—Yes.

12,573. What number of men do you employ on this farm?—At the present time I think we are employing 18 men, 4 boys and 3 women.

12,574. Do they live on the farm?—They live in cottages belonging to the farm.

12,575. Do you see all your men and know them?—Yes, every day; and give them orders.

12,576. Are there any discharged men in your employ?—I may say in order to explain, that previous to the war, or when the war broke out, eight men

were taken from my farm. Of those, four have returned. During their absence we had to rely on German prisoners' labour, and I had six of them for three years.

12,577. With regard to the efficiency of your men, do you find their efficiency equal to what it was prior to the war?—Yes, about the same I think.

12,578. You have nothing to say as to their efficiency?—We have never had any trouble with labour.

12,579. I notice here that the horse keep is 5s. 5d. a day. That is the maximum, I take it, when the horse is working?—The way in which we arrive at that is, from the figures that it costs us to keep the horses during the year.

12,580. Is that an average for the year, or is it for the working days?—This is for the year.

12,581. It is an average for the year of 52 weeks?—Yes.

12,582. *Mr. Thomas Henderson*: You have not shown any costs here for the 1919 wheat crop?—No.

12,583. It is 1918?—Yes.

12,584. I think you replied to Mr. Batchelor that your yield of wheat this year was a quarter down from last year?—That is the estimate. Of course we have not realised that crop yet, but our estimate is one-fourth less.

12,585. That is 3¼ quarters you are producing?—Yes, that is 6 sacks.

12,586. Is that right?—Yes, that is about it, 6½ sacks.

12,587. What about your cost of production this year?—The cost of production this year will be quite one-fourth more.

12,588. So that, roughly speaking, would be £3 6s. 0d. on to your last year's figures?—Yes.

12,589. That is £17?—A big crop will lose money this year.

12,590. And it would lose at 80s., the guarantee which you propose?—The price now you see is 71s.

12,591. Yes; but you are proposing an 80s. guarantee, and you would lose even at that?—The cost of production is abnormal in 1919.

12,592. That is not the question I am asking you. Would you lose on the 80s.?—I think it would be about that. I do not think we should gain anything.

12,593. How many quarters per acre have you this year?—We have about 3½ quarters.

12,594. At £4 a quarter the guaranteed figure. that would be only £14?—Yes.

12,595. So that you are going to lose between £3 and £4 even on the guaranteed price?—Yes, certainly.

12,596. *Mr. Green*: I have been trying to make out your 800 acres of arable. There are 150 acres of wheat, 40 acres of barley, 14 acres of the mangolds, and 60 acres of seed hay, one year's lea. That only makes 264 acres. What is the rest?—The rest is two years' lay; and root crop. We grow 250 acres of roots.

12,597. I was wondering where your profits came in. You see you are losing on your cereals, and you are losing heavily on your sheep. I was wondering where you did make your profits?—The bright spot has been the dairy.

12,598. Then you must make a considerable profit from the milk?—We have made the profit during the last two years. Of course, last year, 1918, we had a very good cereal year.

12,590. It does not amount to very much on your showing, only £1 13s. 5d. an acre. Your farm is near Blandford, is not it?—Yes.

12,600. Do you let the shooting from your farm?—No, we have not let it this year. I am letting it next year.

12,601. Are you troubled with game at all?—No.

12,602. Hares?—No.

12,603. A good deal of it is hillside, is it not?—Yes, very good shooting.

Chairman: We are very much obliged to you.

(*The Witness withdrew.*)

MR. JOHN WILLIAM DOUTHWAITE, N.F.U., called and examined.

Chairman: The costs in connection with your farm, as submitted by the National Farmers' Union, have been before the members of the Commission, and the members of the Commission desire the opportunity of cross-examining you in regard to the items of cost.* I will ask Mr. Smith to begin.

12,604. *Mr. Smith*: Do we understand that these figures here are actual figures of actual expenditure?—Yes, they are.

12,605. They are not estimates?—Not estimates in the least.

12,606. Do we understand that seed in No. 1 is 4 bushels to the acre?—Not all over. It is on that one particular piece.

12,607. That is rather heavy seeding, is not it?—It was very late sown, and you will observe it was not drilled; it was dragged in on top of the plough quite late in November. Of course, we always sow it in thicker late in the season.

12,608. *Mr. Parker*: In the estimates of cost for the wheat crops of 1919, you have a figure for the increase of labour, £132. Is that on account of the shorter hours?—That is because of the last increase of wages from 30s. to 36s. 6d.; and in 1918 the 100 acre crop part of that year was when wages were 25s.

12,609. Then you have made no allowance in this £132 for the fact that the hours have come down from 54 to 50, and to 48 in October?—In our county the hours have been 52 all the year round, so far.

12,610. Has your land suffered in fertility much during the war?—Yes, I should say so. Some of it has been in corn three and four years in succession. Of course we were asked to grow as much corn as we could.

12,611. What would it cost per acre to restore the land to its pre-war fertility?—Roughly speaking, I should say £5 an acre, all round.

12,612. *Mr. Nicholls*: I think you said in reply to Mr Smith that the accounts on page 1 were really actual accounts taken from the farm books?—Yes.

12,613. But I notice on the first page you also add that "in putting them forward for the purpose of the present enquiry additions have been made at certain points." What does that refer to?—That refers to the additions at the bottom, "Add interest, management, and sons' work." That has been done by the Secretary to get it into line with other accounts, I suppose.

12,614. Referring back to what Mr. Parker asked you just now about the land getting foul, I notice on the second page you refer to the aftermath of war farming for continuous corn growing. What has been the kind of continuation there? Have you been running the wheat crops one after the other?—Yes.

12,615. Was that at the request of the War Committee?—Was not it at the request of the country that the farmers should grow corn?

12,616. Are you on the Agricultural Committee?—No.

12,617. Did they come along to interfere in your case at all?—Not at all.

12,618. It was purely a voluntary affair?—It was purely voluntary and patriotic to get corn. Of course, we knew the country wanted corn.

12,619. And you say as a result of that the land has got out of condition, and I notice you have extra costs down here for cleaning foul land. That will apply to practically all the land that has been over white cropped?—Yes.

12,620. And you estimate it will cost about £5 the acre to get that back into condition?—On my own farm I am sure it will cost me that.

12,621. Only one other question, and that is with regard to the tractor. I notice you have not a very enthusiastic view with regard to tractor cultivation. You do not think it will cheapen cost?—I do not think it will be actually cheaper as far as my present experience has gone.

12,622. I notice you put in a big "if" there. I did not know whether you had had many breakdowns?—The first account, the "Overtime" tractor, we were continually having breakdowns.

12,623. Might I ask whether you think that will be got over when the men who work them get more

* *See* Appendix No. IV., Farm No. 1.

familiar with the mechanism?—There is no doubt, I think, it will get simpler and more reliable as time goes on.

12,624. No; I mean, supposing the machine itself was not simpler, would not the men get a better idea as to how to manage a difficult machine?—Yes; but they would not prevent it breaking down. Little parts break down, and the ignition goes wrong, and so on.

12,625. But that can very often be quickly remedied by a man who has some idea of mechanics?—Yes, very often.

12,626. You get a breakdown with a tractor, and a man who is not very familiar with mechanics stops, and then you go along and you find there is something wrong which you cannot trace; whereas when a man who does know is sent for he puts it right in a couple of minutes very often?—It often happens so.

12,627. That is what I meant. Would not it simplify it, and make it a more valuable asset to a farmer, always remembering that he must have some horses?—Yes.

12,628. But that the tractor, as the men get a better knowledge of it, will become a far greater advantage to the farm than it has been up to the present?—Yes, I quite think so.

12,629. *Mr. Lennard*: What sort of land is your farm?—It is what is called stone brash, light land.

12,630. There is a good deal of that in Oxfordshire, I think?—Yes.

12,631. That land feels a dry season especially, does it not?—Not very badly; not so badly as a sandy land for instance.

12,632. But a great deal more than other soils in Oxfordshire?—A good deal more than some soils.

12,633. For instance, the ironstone country in the north, or the Oxford clay?—I cannot say I know much about them really.

12,634. Is your farm near the Cotswolds?—It is not far from the Cotswolds.

12,635. *Mr. Green*: The only thing I want to ask you is this: You describe your farm as typical barley soil, do you not?—Yes.

12,636. You seem to have rather a low average for barley, do you not?—Yes.

12,637. Why is it described as typical barley soil?—It grows nice quality barley, but as the figure shows, it does not grow big crops, in fact it does not grow big crops of anything.

12,638. No; it is rather a low productive farm all through, is it not?—Yes.

12,639. *Mr. Edwards*: You mentioned just now about the management and the sons' work, and the addition made in respect of those. Do your sons work on the farm?—They do.

12,640. And you have not charged anything for them?—No, I have not.

12,641 Is it a common practice in your district that the sons and daughters of the farmers work on the farm?—Yes.

12,642. And no wages are actually paid them?—I cannot speak for other cases at all. I do not know what other farmers may do.

12,643. What is your own practice? Do you actually pay your sons?—No, I do not pay them. Of course, they are only young. One is 16½ and the other is 19. Of course, as they get a bit older, they hope the old man will be able to put them into a farm; but the question is whether I shall be able to.

12,644. I am interested in this, for this reason: that I myself know what it is to work from about 15 to 25 without seeing a penny in wages, and what I wanted to know was whether that practice is general all over the country, of working the farms at the expense of the sons and daughters in this way?—I could not really say. Of course you can hardly call it at the expense of the sons and daughters, if the father succeeds in his business and gets them into a farm at about 25 to 26. That is their pay. So that it is not their expense if they have helped the work of getting a bit of capital to take a farm. Of course if success does not come, it is at their expense. If the father, say, cannot get on and breaks or fails, then it is hard on the sons.

12,645. Have you come across cases of that kind on a farm—a family affair, having two, three, or four sons working on the farm, and the concern failing and these sons having to turn out into the world without anything?—No, I cannot say I know a case like that. Of course the son takes more interest than a paid man does, and they generally manage to succeed.

12,646. *Mr. Duncan*: At what rate have you estimated your sons' labour in the additions that have been made to your accounts?—As I said, in reply to another question just now, those figures have been added on.

12,647. And you do not know the rate?—As you see in the words at the top, I have made no allowance for my sons or interest or management in my figures. My figures on that account, taking the cost of growing 100 acres of wheat, finish at a total of £935 7s. 5d.

12,648. And you do not know at what rate your figures have been accounted?—No.

12,649. Do you know the rate at which the management has been added?—No, I do not.

12,650. When you bought the tractor, what class of man did you employ for working it?—A man who had been driving a steam engine, the most intelligent man I had got.

12,651. Was he a practical ploughman?—Yes.

12,652. Had he had any experience of internal combustion engines before?—No. There were very few countrymen had then. This was in January, 1916, when I first had the tractor.

12,653. Do you find the cost of running the tractor tends to decrease as the man gets more expert?—With the "Overtime" I do not think so, but with the "Titan" I do think so. The "Titan" is more reliable and less costly for repairs and upkeep, as far as I can gather at present.

12,654. Do you think the "Titan" suits your type of land better than the "Overtime"?—I do not say it suits my type of land better than the "Overtime," but it is more reliable in itself.

12,655. Is it a question of power?—No; the "Overtime" is the stronger, if anything.

12,656. Is your farm at Charlbury?—Yes, near Charlbury.

12,657. Which side does it lie?—Almost due east.

12,658. Is this fairly good stone brash?—Useful stone brash medium.

12,659. What is the farm rotation? Is your rotation very similar to the other rotations on the stone brash?—Yes, I expect we do pretty much about the same; but I keep no fixed rotation at all. I grow what I want.

12,660. You do not follow it closely?—No, I do not.

12,661. Do you have any trouble with clover, &c.?—Yes, if we try it too often, we do.

12,662 And rye-grass, I presume?—I do not grow rye-grass.

12,663. How often do you get a crop?—Seven or eight years.

12,664. Only about once in eight years?—Seven or eight years.

12,665. Has that been going on for some time?—That has been my practice since I have been on this farm.

12,666. Then you would get two root crops between clover crops, I presume, and five corn crops in eight years; is that it?—Something like it, I daresay.

12,667. Looking at your sheep account, there is a small deficit. Do you normally reckon on having a deficit on your sheep account?—We have to take what comes. It is a deficit very often, I am afraid.

12,668. Would you consider it is quite a common practice of farmers in your part of Oxfordshire to keep your sheep on the roots too long. That is to say, after they have practically finished fattening?—No; they know too much about farming for that.

12,669. How long would these sheep be on, practically speaking?—These would be on from about Michaelmas to some time in February.

12,670. They would begin going off about the end of January, and keep on till March?—Yes, something like that.

12,671. But does not it strike you as rather a small sum for the keep? You bought them in at an average

of about £4 each and sold them at an average of just over £5 each? That is about £1 apiece, the difference.

12,672. Yes; they were good sheep when you bought them, or at least when you valued them in?—Yes, they were.

12,673. But with that high value when you started feeding them and the comparatively small amount you put on them in the course of, say, 5 months on roots, you were keeping them too long?—No, I absolutely deny I was keeping them too long. As a matter of fact, I think some of them had to go when the roots were gone.

12,674. It was a very bad winter for sheep in your country last winter, 1918-19?—Yes, very bad weather.

12,675. A very bad January and February?—Yes, and it was difficult to get the sheep to do as you would like.

12,676. Turning to the tractor for a moment, you bought this tractor, say, about 1916?—Yes.

12,677. Is not it generally true that the tractors that were bought at that time were a much poorer machine than those that are being bought now?—I think perhaps it may be true; but with any machine you occasionally strike a lucky one, and perhaps you will strike an unlucky one. Although they are all the same pattern, one machine will do better work than another.

12,678. What do you consider the life of this first tractor, the "Overtime," is going to be?—I should say another 12 months will finish her off.

12,679. Have you any idea as to what would be the 1914 values of tenant-right as to exhausted values of cultivations on your farm?—I am afraid I could not speak from memory. If I had the books I could tell you in a moment.

12,680. Would it be anything like £2 or 50s. an acre, spread over the whole of the arable?—I should say perhaps about £2, speaking from memory.

12,681. And, apart from perhaps a little extra cereal cropping, you kept it in fairly good condition during the war period?—Well, I have done the best I could.

12,682. But you kept up your supplies of artificials?—Yes.

12,683. And you have used not quite as much feedingstuffs, but still some, and kept it in fairly good condition?—Yes, I have tried the best I could.

12,684. So that taking those facts altogether, say, the 1914 values on unexhausted manures and tillages were about £2, and you have kept it fairly well, except that you have cropped it rather more than usual with cereals, would you really seriously state that you have lost £5 worth of value on it; or, conversely, that it will take £5 to put it straight?—I think if I were to spend £5 an acre on it all over now, it would be no better than it was in 1914. You may refer, if you would, to the cost of cleaning the foul land, and see what 83 acres have cost me this summer.

12,685. Yes; but still I presume that is only the normal, or slightly above the normal, amount of fallowing?—I have not been in the habit of having bare fallows at all as a rule.

12,686. But you had this amount of bare fallow this year?—Yes.

12,687. *Mr. Batchelor*: Could you tell me how your horses have wrought considerably fewer days during the past year than the previous year, particularly in the months of February, March and April? Is there any special reason?—The special reason would be weather—frost-bound land and roads like ice for two or three weeks. I distinctly remember the time when it was not safe for a horse to step out of the stable.

12,688. What would you consider an average number of horse labour days per year taken over a period of years, allowing for frost and weather?—I should say those two years were about representative.

12,689. Something between the two?—Yes, something about that.

12,690. Your general account of expenses includes time lost by bad weather, cleaning up, hedging, ditching, fencing, insurance and all general accounts. I understand that you keep very accurate records of these?—I do.

12,691. And they work out for the year to Michaelmas, 1918, at 17s. 1d. per acre?—Yes, that is so.

12,692. I notice that, in the year 1916 they reached the very high figure of 27s. Do you remember what the special reason for that was?—I am afraid I cannot speak from memory, but the figures are correct.

12,693. It does strike me as being so high, as compared with any other?—Yes, it strikes me, too, looking at it; but I cannot from memory give any special reason.

12,694. Then for the current year you estimate 20s. per acre?—I think that is a low estimation.

12,695. That is not putting on very much any way for the additional expenses?—No.

12,696. Then, looking at "Cost of growing 16 acres of barley and 40 acres of barley in 1919," I understand you have actual expenses up to 13th August, 1919?—Yes.

12,697. And since that they are estimates?—Yes.

12,698. You will know by this time how the harvest has turned out?—Yes.

12,699. Are your estimates fairly reasonable?—Do you mean estimates for costs?

12,700. Yes?—I have not ledgered it up just for the last month; but I should say they are very near.

12,701. Do you think your estimate of yield is on the high side or on the low side?—I think my estimates there are too high.

12,702. That is what I want to make certain of. That is, now you see what the crop is?—Yes.

12,703. In other words, the crop this year is lower than the preceding years?—That is so.

12,704. *Mr. Rea*: On your sheep return there is some question as to the amount of it. It seems to me it is rather a good return. You put 98 sheep on and you sold 98 sheep?—Yes.

12,705. Do you often get as good a return as that from sheep on turnips?—We very often lose one or two, but that was a lucky lot. There was not a death.

12,706. That is what struck me, that it was very lucky?—Yes, that is correct.

12,707. Your profits are really extra-normal there?—Yes.

12,708. And considering the amount of cake they got in addition to roots, the increase of 27s. a head must have been good too—the selling price over the laying-in price?—Yes, but the balance is not a very big one. It is on the wrong side, is it not?

12,709. I know. That makes it all the worse from your point of view. You had a lucky season, and yet they make a loss?—That is so.

12,710. And that has to be carried on to the succeeding corn crops?—Yes, it has.

12,711. Is it necessary to keep sheep on your land?—It is generally supposed to be good sheep land, and land you cannot keep in condition without sheep.

12,712. That is what I mean. It is land which would not grow corn unless it carried sheep?—It wants sheep.

12,713. Then as to the tractor. Do you not think that your depreciation estimate is too low?—Yes, I do.

12,714. Was last year the first year you had the "Overtime"?—I had the "Overtime" going two years.

12,715. And you think another season will wear it out?—Yes, I do.

12,716. That is my point. I was going to ask you, do not you think they ought to be valued at three years' life?—Yes, I do.

12,717. Say 50 per cent. depreciation the first year, and 25 per cent. each of the two following years, to wipe it off in three years?—Yes, I agree. Of course, when I started, I had no idea that depreciation and repairs were going to be so much, and I did not start charging enough for the work done by the tractor.

12,718. I have had one for three years, and it is practically done now. As far as you have gone, you think you would be inclined to put it on somewhat the same basis?—Yes.

12,719. *Dr. Douglas*: I am not quite clear as to what rate you charge ploughing. It seems to be charged at different rates. You charge £30 5s. 6d. in the wheat account for 30 acres. That is £1 an acre?—Yes.

12,720. Then you charge on 17 acres, only 15s. for ploughing. Is this shallower ploughing, or not?—

That would be tractor ploughing. If you turn to the tractor account, you will see the same ploughing charged at 15s., and that is some of it.

12,721. That accounts for the difference between horse-ploughing and the tractor account?—You will see I have not charged sufficient. I charged the "Overtime" work at 15s.; then I find that is not enough, then I put it at 18s., and then at 25s.

12,722. So that the 15s. is really a mistake?—The 15s. was actually charged to the tractor, but it was not sufficient.

12,723. It was a mistake?—It was not a mistake, because I had not had the experience.

12,724. I mean if you had that to charge now, you would charge more?—Yes.

12,725. It is too low a rate?—Yes, that is so.

12,726. Then as to the price you allow for dung, I see you allow for 124 loads, £24 at one place, and then your charge for dung for swedes, 3s. 6d. a load, and the charge for dung on barley 5s. a load?—The first case is in 1917 at 3s. 6d., and the second case is in 1919, when the cost of cake and feeding stuffs was very much more, and dung is worth much more.

12,727. Do you think either of these prices high?—No, I do not; they are low.

12,728. How do you arrive at these figures? Are they customary, or what?—No, I do not know that it is customary at all; it is the way I have always done it myself. I find if I charge a crop with dung at more money than that, it always results in a loss on that crop.

12,729. Would not it really be better to show the cost of the crop by charging proportionately for the different operations and expenses of it?—I suppose when I have been figuring it out I have put the dung at what I thought, to keep the costs down.

12,730. In your part of the country do you sell dung to incoming tenants as a way-going?—No.

12,731. Does the new tenant get the dung for nothing?—No, he pays for the unexhausted cake and labour on the dung. He does not pay for the dung itself.

12,732. So that you really have no basis?—No, no regular basis.

12,733. But compared with artificial fertilisers these prices would be much too low, would they not?—Yes, I think so.

12,734. You would have no doubt of that, would you?—Not a bit of doubt.

12,735. So that really the crop is under-charged. That is my point?—Yes, I think so.

12,736. Then in the same way, in your sheep account, you charge the sheep with £45 for cake. But you do not credit the sheep with anything in respect of that feeding?—No, I think not.

12,737. You charge the succeeding crop with a certain proportion of the root crop?—Yes.

12,738. But you do not charge it with anything in respect of the concentrated feeding consumed by the sheep?—That is so.

12,739. Is not that a mistake in accounting?—It may not be quite sound, but I have always made that my system, partly for simplicity. I just simply charged half the cost of the roots to the sheep and the other half to crops afterwards.

12,740. But if you were to tell us what the cost of these crops following sheep is, ought not you to charge against the crop the residual value of the food fed to the sheep?—Yes, certainly I should do so, to be quite correct.

12,741. So that you really made an addition of about £11 to the profits on the sheep, which would wipe off the deficit, and you add £11 to the cost of the succeeding crops?—Yes.

Chairman: We are very much obliged to you.

(*The Witness withdrew.*)

ROYAL COMMISSION ON AGRICULTURE.

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APPENDIX No. I.

Additional Evidence-in-Chief handed in by Mr. L. N. Gooding on behalf of the Norfolk Chamber of Agriculture and the Farmers' Federation, Ltd., in connection with his evidence given on September 16th, 1919.

"A"

FARM ACCOUNTS.

For the years 1909–1918 (both inclusive).

Distance from nearest railway station.....6 miles.
Size of farm:—
Arable .....506 acres.
Pasture, Orchards } 316 acres (including park, 178 acres).
Nature and condition of soils.....Light land.
System of farming ..... Principally four-course.

Date to which annual accounts are made up, October 11th.

Crop Acreages and Numbers of Live Stock at 4th June, 1909, 1914, 1919

Crops.

Crops.	4th June, 1909.	4th June, 1914.	4th June, 1919.
	Acres.	Acres.	Acres.
Corn :—			
Wheat	—	28	—
Barley	124½	89	91
Oats	68½	70	62½
Beans	—	—	—
Peas	15	18	10
Other Corn—Rye	10	25	58
Potatoes	½	—	—
Roots :—			
Mangels	18	17	17
Swedes and Turnips	85	86	59
Other Roots	10	11	9
Forage Crops, viz. :—			
Mustard	18	—	27
" Seed	—	—	12
Bare Fallow	—	—	—
Hay :—			
Rotation	36	26½	73
Meadow	29	20	25
Grass :—			
Rotation	101	85	35
Permanent	275	287	292
Other Crops, viz. :—			
Lucerne	9	40	53

Live Stock.

Class of Stock.	4th June, 1909.	4th June, 1914.	4th June, 1919.
	No.	No.	No.
Horses :—			
Regular Work Horses	13	13	13
Young Horses for Farm Work	2	1	—
Other Horses	1	1	1
Cattle :—			
Cows and Heifers in Milk or in Calf.	—	—	—
Young Dairy Cattle	—	—	—
Other Cattle	24	23	25
Sheep :—			
Ewes	481	430	441
Home-bred Lambs	569	480	350
Other Sheep	—	5	4
Pigs :—			
Sows	4	—	—
Other Pigs	52	—	—
Poultry	—	—	—

Number of Men working on the Farm.

—	June, 1909.	June, 1914.	June, 1919.
Foreman	1	1	1
Horsemen	3	3	3
Stockman	1	1	1
Shepherds	2	2	2
Labourers	7	6	3
Casuals	3	1	2
Boys	2	2	3
Women	—	—	1
	19	16	16
Wages paid for the week ending 4th June.	£9 18 8	£9 18 11	£23 1 2

Capital Valuation in 1908-9, 1913-14, and at Michaelmas, 1918.

1908–9.			1913–14.		Michaelmas, 1918.		Value at Market Values, Oct., 1918.
Description.	No.	Total Value.	No.	Total Value.	No.	Total Value.	
		£		£		£	£
Horses	11	231	14	384	13	340	1,503
Pony	1	8	1	5	1	3	6
Cattle	63	743	62	884	—	—	—
Sheep	501	1,102	459	872	456	866	2,052
Rams	10	92	9	68	9	132	143
Pigs	6½	100	—	—	—	—	—
Poultry	—	—	—	—	—	—	—
Implements and machinery:							
Tractor	—	—	—	—	—	—	—
Engine and Thresher.	—	—	—	—	—	—	—
Milking Machine.	—	—	—	—	—	—	—
Other implements and machinery, per acre.	—	480	—	313	—	250	900
Tenant Right:							
Roots	—	202	—	152	—	205	470
Hay	—	320	—	254	—	263	825
Corn	—	592	—	762	—	1,659	1,659
Seeds	—	64	—	122	—	85	203 / 85
Manure	—	4	—	22	—	20	20
	—	3,938	—	3,838	—	3,823	7,866
Floating Capital, viz., one-half the yearly expenditure on rent, rates, wages, purchased seeds, manures, and feeding stuffs, miscellaneous and maintenance and Live Stock.	—	1,562	—	1,250	—	2,401	2,401
Extra value to bring up to Market Value.	—	2,343	—	1,980	—	4,043	—
Totals		7,843	—	7,068	—	10,267	10,267

Receipts and Payments Account for 10 Years from October, 1908, to October 1918.

Light Land Area 822a. 1r. 7p.

Receipts.

October:	1908-9.	1909-10.	1910-11.	1911-12.	1912-13.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.	Totals.
	£	£	£	£	£	£	£	£	£	£	£
Live stock and wool sold.	1,896	2,313	1,820	1,197	1,908	1,834	1,988	2,244	2,689	3,416	21,305
Corn, hay and roots ...	730	1,622	1,277	1,097	976	985	1,499	1,359	2,540	1,646	13,731
Dairy produce ...	—	—	—	—	—	—	—	—	—	—	—
Fowls and eggs ...	—	—	—	—	—	—	—	—	—	—	—
Seeds and manures ...	1	2	7	15	22	4	3	18	1	3	76
Taking in stock to graze.	36	50	54	37	37	47	60	55	43	37	456
Implements sold ...	1	15	10	6	5	—	33	—	—	3	75
Total receipts ...	2,666	4,002	3,168	2,352	2,948	2,870	3,583	3,676	5,273	5,105	35,643
Valuation at the end of the year.	4,495	4,224	3,229	3,452	3,838	3,202	3,697	3,965	3,436	3,823	—
	7,161	8,226	6,397	5,804	6,786	6,072	7,280	7,641	8,709	8,928	—
Balance being loss on year.	—	—	256	373	—	266	—	—	—	—	—
Totals	7,161	8,226	6,653	6,177	6,786	6,338	7,280	7,641	8,709	8,928	73,899

Payments.

October:	1908-9.	1909-10.	1910-11.	1911-12.	1912-13.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.	Total.
	£	£	£	£	£	£	£	£	£	£	£
Valuation at beginning of year.	3,938	4,495	4,224	3,229	3,452	3,838	3,202	3,677	3,965	3,436	—
Live stock bought ...	948	1,091	434	1,136	1,289	595	1,216	1,323	1,419	2,031	11,482
Corn and seeds bought for seed.	223	211	295	235	274	211	266	409	473	529	3,126
Feeding stuffs, cake and artificial manures.	820	611	497	393	504	461	561	640	602	669	5,758
Glebe rent	14	14	14	14	14	14	14	14	19	19	150
Schedule: A Assessment.	238	238	238	238	238	238	238	238	238	194	2,336
Tithe paid	81	82	83	84	87	88	89	96	107	127	924
Rates, taxes (excluding income tax).	26	26	31	29	30	34	32	29	28	30	295
Labour on the farm ...	597	578	632	637	667	661	589	639	788	900	6,688
Tradesmen's Accounts	170	207	189	168	175	193	176	201	236	276	1,991
Sundries, new Implements.	7	8	16	14	27	5	85	5	3	28	198
Total payments ...	3,124	3,066	2,429	2,948	3,305	2,500	3,266	3,594	3,913	4,803	32,948
	7,062	7,561	6,653	6,177	6,757	6,338	6,468	7,271	7,878	8,239	—
Balance being profit on the year.	99	665	—	—	29	—	812	370	831	689	—
Totals	7,161	8,226	6,653	6,177	6,786	6,338	7,280	7,641	8,709	8,928	73,899

Summary of Profits.

	Profits.	Loss.
	£	£
Year ending October 11th, 1909 ...	99	—
" " 1910 ...	665	—
" " 1911 ...	—	256
" " 1912 ...	—	373
" " 1913 ...	29	—
" " 1914 ...	—	266
" " 1915 ...	812	—
" " 1916 ...	370	—
" " 1917 ...	831	—
" " 1918 ...	689	—
	3,495	895
Deduct loss	895	—
	10)2,600	—
Average profit for ten years	£260	—

This shows an average balance of £260 to recompense the farmer for his own time and skill and pay interest on his capital.

I estimate the capital required to work this farm to-day is not less than £10,000, interest on which at 5 per cent. is £500 per annum;

	£		£
Schedule B, Assessment of £688.	Rent 344	Average profits ...	260
Interest on £10,000 at 5 per cent.	500	Loss to farmer ...	584
	844		844

showing that the farmer received £584 less per annum for his capital invested in the farm than he would receive if it were invested in Exchequer Bonds besides giving him no return for his own labour.

There has been nothing charged in these accounts for management, office expenses, or auditor's fees.

The profits as shown above have very little relation to the profits likely to be made during the present year or in the immediate future, as costs are much higher than they were in 1918. The labour alone will be increased by about £300 for the present year, and still more for next year.

The farmer should have a clear return after paying rent of at least 10 per cent. interest upon the capital he has invested in his farm.

This farm has been worked on a strictly commercial basis, and all produce used for the Hall or estate has been charged at current market values and the labour and skill of the owner and his agent have not been charged for in the accounts.

"B" Farm.

Profit and Loss Account for 10 Years, from October, 1908, to October, 1918.

Light Land Farm in Norfolk.

Area 775a. 3r. 16p.

Dr.

October:	1908–9.	1909–10.	1910–11.	1911–12.	1912–13.	1913–14.	1914–15.	1915–16.	1916–17.	1917–18.	Total.
	£	£	£	£	£	£	£	£	£	£	£
Labour...	570	601	613	625	674	647	612	680	751	768	6,541
Feeding stuff, Corn, bought Cake, etc.	1,024	764	742	735	760	705	1,053	963	1,123	541	8,410
Seed corn and seeds...	253	260	239	278	247	240	277	371	441	608	3,214
General expenses ...	233	226	201	160	197	212	201	229	279	312	2,250
Tithe, rates and taxes	123	130	130	125	131	139	144	191	235	256	1,604
Implements	34	32	33	34	35	36	34	31	29	25	323
Horses...	14	73	56	72	25	—	56	86	1	—	383
Total	2,251	2,086	2,014	2,029	2,069	1,979	2,377	2,551	2,859	2,510	22,725
Balance, being profit on the year.	248	654	—	—	600	463	770	845	2,258	1,138	—
Total	2,499	2,740	2,014	2,029	2,669	2,442	3,147	3,396	5,117	3,648	29,701

Cr.

October:	1908–9	1909–10	1910–11	1911–12	1212–13	1913–14	1914–15	1915–16	1916–17	1917–18	Total.
	£	£	£	£	£	£	£	£	£	£	£
Horses...	—	—	—	—	—	23	—	—	—	47	70
Sheep and wool sold	156	369	352	202	392	629	701	918	1,349	195	5,263
Pigs sold	593	481	393	418	539	496	518	461	823	454	5,176
Neat Stock sold ...	294	355	289	236	293	279	312	317	534	573	3,482
Farm produce ...	1,456	1,534	782	943	1,442	1,010	1,616	1,699	2,410	2,377	15,269
Sundry receipts ...	—	1	2	8	3	5	—	1	1	2	23
Total	2,499	2,740	1,818	1,807	2,669	2,442	3,147	3,396	5,117	3,648	29,283
Balance, being loss on the year.	—	—	196	222	—	—	—	—	—	—	—
Total ...	2,499	2,740	2,014	2,029	2,669	2,442	3,147	3,396	5,117	3,648	29,283

Summary of Profits.

	Income Tax paid.	Profits.	Loss.
	£	£	£
Year ending October 11th, 1909	6	248	—
" " 1910	6	654	—
" " 1911	—	—	196
" " 1912	—	—	222
" " 1913	—	600	—
" " 1914	6	463	—
" " 1915	9	770	—
" " 1916	51	845	—
" " 1917	85	2,258	—
" " 1918	85	1,138	—
	248	6,976	418
Deduct Losses		418	
Add Income Tax included in expenditure		248	
		10) 6,806	
Average Profit for ten years ...		680	
Deduct Schedule "A" Assessment		291	
		£479	

This shows an average balance of profit of £479 per annum to recompense the farmer for his own time and skill and pay interest on his capital.

I estimate the capital required to work this farm to-day is £9,000; interest on which at 5 per cent. is £450 per annum.

			£
Schedule "B" Assessment of £682.	Rent of £341	Average Profits ...	680
Interest on £9,000 at 5 per cent.	450	*Loss* to Farmer ...	111
	791		791

Showing a loss of £111 to the farmer and no return for his own labour.

The profits shown in 1917 are due to the extent of about £1,000 owing to realising part of the capital by selling the flock of ewes which had been taken in the previous valuation at a very low figure.

The profits for 1919 will probably be much lower owing to the increased expenses and the poor harvest resulting from the long drought in the early summer.

"C" Farm.

Profit and Loss Account for Six Years.

Light Mixed Soil Farm in West Suffolk.

Area 428a. 0r. 38p.

Dr.

October—	1908–1909.	1909-10.	1910–11.	1911-12.	1912–13.	1913-14.	Totals.
	£	£	£	£	£	£	£
Labour	441	443	444	432	461	453	2,674
Feeding stuffs, corn cake, etc.	995	963	860	726	792	855	5,191
Seed corn and seeds	97	142	129	120	168	99	755
General expenses	129	134	156	109	118	148	794
Tithe, rate and taxes	95	97	97	94	102	110	595
Implements	28	26	28	27	29	27	165
Horses	—	—	—	—	—	—	—
Total	1,785	1,805	1,714	1,508	1,670	1,692	10,174
Balance—being profit on the year	393	726	111	296	688	172	—
Total	2,178	2,531	1,825	1,804	2,358	1,864	12,560

Cr.

	£	£	£	£	£	£	£
Horses	30	61	56	34	23	60	264
Sheep and wool	290	288	348	427	407	394	2,154
Pigs	586	623	474	469	560	371	3,283
Neat stock	324	435	303	180	287	225	1,754
Farm produce	948	1,121	644	692	1,080	609	5,094
Sundry receipts	—	3	—	2	1	5	11
Total	2,178	2,531	1,825	1,804	2,358	1,864	12,560
Balance—being *loss* in the year	—	—	—	—	—	—	—
Total	2,178	2,531	1,825	1,804	2,358	1,864	12,560

SUMMARY OF PROFITS.

——	Profits.	Income Tax paid.
	£	
Year ending October 11th, 1909	393	5
" " " 1910	726	6
" " " 1911	111	6
" " " 1912	296	—
" " " 1913	688	6
" " " 1914	172	6
	2,386	29
Add Income Tax included in expenses	29	
	6)2,415	
Average Profits for 6 years.	402	

This farm was let to a new tenant in 1915 at a rental of £350.

The capital required to work above farm at the present time is about £7,000, and to enable the farmer to pay the rent and give him 5 per cent. interest on his capital he wants to make a profit of £700.

"D" Farm

Mixed Soil Farm in West Suffolk

Area 1,101a. 3r. 33p.*

Profit and Loss Account for Nine Years 1908-1917

Dr.

October :—	1908–9.	1909-10.	1910–11	1911–12.	1912–13.	1913–14.	1914–15	1915–16.	1916–17.	Totals.
	£	£	£	£	£	£	£	£	£	£
Labour	831	828	837	889	890	944	847	1,010	1,11	8,193
Feeding stuffs, corn, cake, etc.	1,628	1,410	1,242	1,521	1,245	1,199	1,577	1,667	1,402	12,891
Seed corn and seeds	327	267	370	338	318	272	420	420	553	3,285
General expenses	283	338	340	329	330	402	273	306	435	3,036
Tithe, rates, and taxes	174	178	200	195	207	228	220	332	245	1,979
Implements	70	64	61	60	58	58	55	51	48	525
Horses	—	12	—	—	—	20	—	36	6	74
Total	3,313	3,097	3,050	3,332	3,048	3,123	3,392	3,822	3,806	29,983
Balance—being profit on the year.	1,127	1,756	335	155	1,004	356	2,013	271	2,631	—
Total	4,440	4,853	3,385	3,487	4,052	3,479	5,405	4,093	6,437	39,631

* Amended to 1112 acres—*see* Q. 9609.

"D" Farm—*continued.*

Mixed Soil Farm in West Suffolk—*continued.*

Cr.

October :	1908–9.	1909–10.	1910–11.	1911–12.	1912–13.	1913–14.	1914–15.	1915–16	1916–17.	Totals.
	£	£	£	£	£	£	£	£	£	£
Horses	5	—	129	28	18	—	240	—	—	420
Sheep and wool	486	668	275	366	449	594	770	417	522	4,517
Pigs	830	607	519	594	665	543	679	632	646	5,715
Neat stock	641	914	530	461	584	567	569	378	1,015	5,659
Farm produce	2,199	2,380	1,659	1,751	2,067	1,534	2,892	2,480	4,037	20,999
Fowls	71	70	68	56	62	54	39	29	22	471
Dairy produce	207	214	204	256	204	182	185	153	187	1,792
Sundry receipts	1	—	1	5	3	5	31	4	8	58
Total...	4,440	4,853	3,385	3,487	4,052	3,479	5,405	4,093	6,437	39,631
Balance—being *loss* in the year	—	—	—	—	—	—	—	—	—	—
Total...	4,440	4,853	3,385	3,487	4,052	3,479	5,405	4,093	6,437	39,631

Summary of Profits.

— —	Profits.	Income Tax Paid.
	£	£
Year ending October 11th, 1909 ...	1,127	8
" " 1910 ...	1,756	9
" " 1911 ...	335	13
" " 1912 ...	155	—
" " 1913 ...	1,004	—
" " 1914 ...	356	14
" " 1915 ...	2,013	—
" " 1916 ...	271	104
" " 1917 ...	2,631	—
	9,648	148
Add Income Tax included in Expenses	148	
	9,796	
Average profits for 9 years	1,088	

This farm was let in 1918 to a new tenant at a rent of £750.

To work the farm properly at the present time a capital of not less than £15,000 would be required.

	£		£
Rent	750	Average profits ...	1,088
Interest on £15,000 at 5%.	750	Loss to farmer ...	412
	1,500		1,500

Showing that the farmer loses £412 per annum by investing his money in the farm, instead of in Government securities, without getting any return for his own labour.

The following comparison of prices gives some idea of the great rise in prices of all machinery, harness, manure, and feeding stuffs required upon the farm.

Comparison of Prices.

Description.	1914.	1918.	1919.
	£ s. d	£ s. d.	£ s. d.
Feeding-stuffs and Meals:—			
Linseed Cake, per ton	8 2 6	19 0 0 (plus car.)	26 0 0
Cotton Cake "	5 2 6	14 10 0	20 15 0
Bran ... "	6 0 0	12 10 0	12 15 0
Dried Grains "	5 7 6	16 0 0	16 0 0
Middlings "	6 7 6	14 15 0	14 15 0
Maize Germ "	6 2 6	21 5 0	—
Manures :—			
Superphosphate, 30% ... "	2 18 6	6 2 6	7 4 6
Basic Slag "	2 10 8	4 2 6	3 18 0
Nitrate of Soda "	11 10 0	30 0 0	25 0 0
Harness, &c.:—			
Collars, 22" ... each	14 6	1 12 6	2 2 0
Plough Lines ... "	1 3½	3 6	3 6
Harness Oil, per gal.	3 3	9 6	9 6
Rick Cloths, 12×10 each	10 0 0	18 0 0	21 0 0
" " ... "	6 0 0	15 0 0	18 0 0
Corn Sacks 4½ "	2 5	5 10	6 3½
Binder Twine, per cwt.	2 4 10	5 10 0	6 3 4
Waggon Ropes, 30 ft. ... ... each	6 6	—	13 6
Thatching Cord, per stone	4 0	10 0	10 10½
Implements :—			
Ploughs (Ransomes) each	5 0 0	11 0 0	11 17 6
Binders (Albion 5½ ft.) ... ... "	25 19 6	63 10 0	73 5 0
Grass Mower (Bamlett) ... "	16 15 0	25 10 0	32 12 6
Root Cutters ... "	4 5 0	6 10 0	8 0 0
Sheep Troughs with Pail ... "	8 6	1 3 0	1 5 0
Hurdles ... per doz.	12 0	1 0 0	1 16 0
Plough Shares, B F P.... "	9 3	14 4	19 4

Comparison of Prices—*continued.*

Description.	1914.	1918.	1919.
	£ s. d.	£ s. d.	£ s. d.
Sundries :—			
Horse Shoeing per set	2 6	5 0	7 6
Wire Nails per stone	1 4½	—	6 6
Coal ... per ton	1 3 6	1 15 9	2 1 9
Motor Spirit per gal.	1 9	3 4	3 0½
Paraffin Oil "	5½	1 9	1 2½

Cost of Growing One Acre of Wheat on Mixed Soil in Norfolk.

Tillage operations, etc.	Acres worked per day.	Horses used.	Men.	Cost per acre.
				£ s. d.
Proportion of cleaning land for root crop.	—	—	—	1 10 0
Farmyard manure, 12 loads per acre.	—	—	—	3 0 0
Do. carting and spreading.	—	—	—	1 2 0
Ploughing clover layer ...	1	2	1	0 19 6
Rolling	8	2	1	0 2 5½
Harrowing	5 (twice)	2	1	0 3 10½
Drilling	10	3	2½	0 3 8
Seed, 10 pecks at 40*s.* ...	—	—	—	1 5 0
Harrowing in	10	2	1	0 1 11½
Bird scaring	—	—	—	0 1 3
Spring harrowing	10	2	1	0 1 10½
Rolling	8	2	1	0 2 5½
Horse hoeing	8	1	1½	0 2 2
Hand hoeing and weeding	—	—	—	0 15 0
Harvesting	—	—	—	2 0 0
Binder twine, 5 lbs. at 1*s.* 1*d.*	—	—	—	0 5 5
Thatching	—	—	—	0 2 6
Rent	—	—	—	1 0 0
Rates and insurance ...	—	—	—	0 3 0
Repairs and renewals to implements.	—	—	—	0 12 6
Foreman's superintendence	—	—	—	0 4 0
Threshing and delivery to mill.	—	—	—	1 0 0
Total cost per acre ...				14 18 7½

The average estimated yield of wheat from mixed soil land in Norfolk is 28 bushels per acre.

CASH RESULT OF GROWING ONE ACRE OF WHEAT ON MIXED SOIL LAND.

Cost of production.	Average yield.	Government price.	Cash return per acre.
£ s. d.		s. d.	£ s. d.
14 18 7½	28 bushels	9 5½	13 4 3
	Deduct for 5 per cent. dross corn.		0 1 2
			13 3 1
	Loss per acre ...		1 15 6½
14 18 7½			14 18 7½

Showing the cost of production of wheat on mixed soil land to be 42s. 10d. per coomb of 18 stone without allowing the farmer any interest on his capital or return for his own time and skill.

The Government minimum guaranteed price for this year's crop is 37s. 9d. per coomb of 18 stone.

COST OF GROWING ONE ACRE OF OATS ON MIXED SOIL IN NORFOLK.

Tillage operations.	Acres worked per day.	Horses used.	Men.	Cost per acre.
				£ s. d.
Proportion of cleaning land for root crop.	—	—	—	1 10 0
Value of folding previous crop.	—	—	—	1 10 0
Ploughing layer	1	2	1	0 19 6
Rolling	8	2	1	0 2 5½
Harrowing (twice) ...	5	2	1	0 3 10½
Drilling	10	3	2½	0 3 8
Seed, 4 bushels per acre at 35s.	—	—	—	1 15 0
Harrowing in	10	2	1	0 1 11½
Bird scaring	—	—	—	0 1 3
Harrowing	10	2	1	0 1 10½
Rolling	8	2	1	0 2 5½
Horse hoeing	8	1	1½	0 2 2
Hand hoeing and weeding	—	—	—	0 15 0
Harvesting	—	—	—	2 0 0
Binder twine, 5 lbs. at 1s. 1d.	—	—	—	0 5 5
Thatching	—	—	—	0 2 6
Rent	—	—	—	1 0 0
Rates and insurance ...	—	—	—	0 3 0
Repairs and renewals to implements.	—	—	—	0 12 6
Foreman's superintendence	—	—	—	0 4 0
Threshing and delivery to market.	—	—	—	1 0 0
				12 16 7½

The estimated average yield of oats from mixed soil in Norfolk is 44 bushels per acre.

CASH RESULT OF GROWING ONE ACRE OF OATS ON MIXED SOIL.

Cost of production.	Average Yield.	Government Price.	Cash return per acre.
£ s. d.			£ s. d
12 16 7½	44 bushels.	5s. 11½d. per bushel, 3st.	13 1 3
Profit per acre. 0 3 0½	Deduct for 5 per cent. dross corn.		0 1 7
12 19 8			12 19 8

Showing the cost of production to be 23s. 7d. per coomb, without allowing interest on capital or profit for the farmer, the Government minimum guaranteed price being 23s. 9d.

COST OF GROWING ONE ACRE OF BARLEY ON MIXED SOIL IN NORFOLK.

Tillage Operations.	Acres worked per day.	Horses used.	Men.	Cost per acre.
				£ s. d.
Value of folding previous crop.	—	—	—	1 10 0
Part cost of cleaning land for roots.	—	—	—	2 10 0
Ploughing	1	2	1	0 19 6
" (2nd Ploughing)	1¼	2	1	0 15 8
Cultivator	8	3	1	0 3 2½
Harrow	10	2	1	0 1 11½
Rolling	8	2	1	0 2 5½
Drilling	10	2	2	0 2 8½
Harrowing in	10	2	1	0 1 11½
Rolling	8	2	1	0 2 5½
Seed, 10 pecks at 36s. co. ...	—	—	—	1 2 6
Bird Scaring	—	—	—	0 [illegible] 3
Weeding	—	—	—	0 12 6
Harvesting	—	—	—	2 0 0
Binder Twine, 4 lbs. at 1s.1d.	—	—	—	0 4 4
Thatching	—	—	—	0 3 0
Rent	—	—	—	1 0 0
Rates and Insurance ...	—	—	—	0 3 0
Repairs and Renewals to Implements.	—	—	—	0 12 6
Foreman's Superintendence	—	—	—	0 4 0
Threshing and Delivery to Market.	—	—	—	1 7 0
Total cost per acre...	—	—	—	13 19 11½

The estimated average yield of barley for mixed soil in Norfolk is 36 bushels per acre.

CASH RESULT OF GROWING ONE ACRE OF BARLEY ON MIXED SOIL.

Cost of Production.	Average Yield.	Government Price.	Cash Return per acre.
£ s. d.		s. d.	£ s. d.
13 19 11½	36 bushels of 4 stone.	8 7¼	15 9 9
Profit per acre. 1 8 5¼	Deduct for 5 per cent. dross corn.		0 1 4
15 8 5			15 8 5

Showing that the Government minimum price for this year's crop will leave a profit to the grower of £1 8s. 5¼d. per acre if he gets an average return of 36 bushels per acre.

It should be borne in mind, however, that the yield of corn this year is estimated to be much below the average.

COST OF GROWING ONE ACRE OF WHEAT ON HEAVY LAND IN NORFOLK.

Tillage operations.	Acres worked per day.	Horses used.	Men.	Cost per acre.
				£ s. d.
Part cost of Summer Fallowing.	—	—	—	1 10 0
Farmyard Manure, 12 loads at 5s.	—	—	—	3 0 0
Do. carting and spreading	—	—	—	1 2 0
Ploughing Clover land or Bean Stubble.	¾	2	1	1 9 3
Harrowing Heavy (twice)	4	3	1	0 6 4½
Harrowing Light (twice)	4	2	1	0 4 10½
Rolled (twice)	4	3	1	0 6 4½
Drilling	8	3	2½	0 4 7
Seed, 10 pecks at 40s. co. ...	—	—	—	1 5 0
Harrowing in	10	2	1	0 1 11½
Bird Scaring	—	—	—	0 1 3
Making water furrows and finishing off headlands.	—	—	—	0 2 0
Rolling in Spring	8	2	1	0 2 5½
Horse Hoeing	6	1	1½	0 2 10½

COST OF GROWING ONE ACRE OF WHEAT ON HEAVY LAND IN NORFOLK—*continued.*

Tillage operations.	Acres worked per day.	Horses used.	Men.	Cost per acre.
				£ s. d.
Hand Hoeing and Weeding	—	—	—	1 0 0
Harvesting	—	—	—	2 10 0
Binder Twine. 6 lbs. at 1*s.* 1*d.*	—	—	—	6 6
Thatching	—	—	—	2 6
Rent	—	—	—	1 10 0
Rates and Insurance ...	—	—	—	4 0
Repairs and Renewals to Implements.	—	—	—	12 6
Foreman's Superintendence	—	—	—	4 0
Threshing and Delivery to Market.	—	—	—	1 10 0
Total cost per acre ...	—	—	—	17 18 5¾

The average estimated yield of wheat from heavy land is 36 bushels per acre.

CASH RESULT OF GROWING ONE ACRE OF WHEAT ON HEAVY LAND.

Cost of Production.	Average Yield.	Government Price	Cash Returns per Acre.
£ s. d.		s. d.	£ s. d.
17 18 5¾	36 bushels of 4½ st.	9 5¼	16 19 9
	Deduct for 5 per cent. dross corn.		0 1 4
			16 18 5
	Loss per acre ...		1 0 0¾
17 18 5¾			17 18 5¾

Showing the cost of production to be 40s. per coomb of 18 stone without allowing the farmer any interest on his capital or profit for himself; the Government guaranteed minimum price for this year's crop being 37s. 9d.

COST OF GROWING ONE ACRE OF OATS ON HEAVY LAND IN NORFOLK.

Tillage Operations.	Acres worked per day.	Horses used.	Men.	Cost per acre.
				£ s. d.
Part Cost of Summer Fallow.	—	—	—	1 10 0
Ploughing. Clover Layer or Bean Stubble.	¾	2	1	1 9 0
Heavy Harrowing (twice)	4	3	1	6 4½
Harrowing (light twice) ...	4	2	1	4 10½
Rolling (twice)	4	3	1	6 4½
Drilling	8	3	2½	4 7
Seed. 4 bushels at 35*s.* co.	—	—	—	1 15 0
Harrowing in	10	2	1	1 11½
Bird Scaring	—	—	—	1 3
Making Water Furrows ...	—	—	—	2 0
Rolling	8	2	1	2 5¼
Horse Hoeing	6	1	1½	2 10½
Hand Hoeing and Weeding	—	—	—	1 0 0
Harvesting	—	—	—	2 10 0
Binder Twine. 6 lbs. at 1*s.* 1*d.*	—	—	—	6 6
Thatching	—	—	—	2 6
Rent	—	—	—	1 10 0
Rates and Insurance ...	—	—	—	4 0
Repair and Renewals to Implements.	—	—	—	12 6
Foreman's Superintendence	—	—	—	4 0
Threshing and Delivery to Market.	—	—	—	1 15 0
Total cost per acre ...	—	—	—	14 11 5¾

The average estimated yield of oats from this class of land is 48 bushels per acre.

CASH RESULT OF GROWING ONE ACRE OF OATS ON HEAVY LAND.

Cost of Production.	Average Yield.	Government Price.	Cash Returns per Acre.
£ s. d.		s. d.	£ s. d.
14 11 5¾	48 bushels of 3 st. ...	5 11¼	14 5 0
	Deduct for 5 per cent. dross corn.		1 9
			14 3 3
	Loss per acre ..		8 2¾
14 11 5¾			14 11 5¾

Showing the cost of production to be 24s. 5d. per coomb of 12 stone without allowing the farmer any interest on his capital or profit for himself; the Government guaranteed minimum price for this year's crop being 23s. 9d.

COST OF GROWING ONE ACRE OF BARLEY ON HEAVY LAND IN NORFOLK.

Tillage operation.	Acres worked per day.	Horses used.	Men.	Cost per acre.
				£ s. d.
Part Cost of Summer Fallowing.	—	—	—	2 10 0
Artificial Manure—1 cwt. per acre.	—	—	—	2 11 0
Sowing—Artificial Manure	—	—	—	2 6
Ploughing	¾	2	1	1 9 3
Cultivator	7	3	1	3 7¾
Harrowing, Heavy ...	8	3	1	3 2¼
,, Light ...	10	2	1	1 11¼
Drilling	8	2	2½	3 10
Harrowing in (twice) ...	10	2	1	3 10½
Seed. 10 Pecks at 36*s.* co.	—	—	—	1 2 6
Bird Scaring	—	—	—	1 3
Horse Hoeing	6	1	1½	2 10½
Weeding	—	—	—	10 0
Harvesting	—	—	—	2 10 0
Binder Twine. 5 lbs. at 1*s.* 1*d.*	—	—	—	5 5
Thatching	—	—	—	2 6
Rent	—	—	—	1 10 0
Rates and Insurance ...	—	—	—	4 0
Repair and Renewals to Implements.	—	—	—	12 6
Foreman's Superintendence	—	—	—	4 0
Threshing and Delivery to Market.	—	—	—	1 10 0
Total cost per acre ...				16 4 3¼

The average estimated yield of barley from this class of land is 40 bushels per acre.

CASH RESULT OF GROWING ONE ACRE OF BARLEY ON HEAVY LAND.

Cost of Production.	Average Yield.	Government Price.	Cash Returns per Acre.
£ s. d.			£ s. d.
16 4 3¼	40 bushels.	8*s.* 7¼*d.* bushel of 4 st.	17 4 2
0 18 4¾ profit per acre	Deduct for 5 per cent. dross corn.		0 1 6
17 2 8			17 2 8

Showing that if the grower gets an average yield of 40 bushels per acre and the Government minimum guaranteed price for the whole of his produce there will be a profit of 18s. 4¾d. per acre, without charging interest on capital or anything for the farmer's own time.

SUMMARY.

	Cost of Production per Acre.	Cash Return per Acre.	Loss.
	£ s. d.	£ s. d.	£ s. d.
Light land—			
Wheat	11 4 4	10 1 11	
Oats	7 18 1	7 13 7½	
Barley	8 17 3½	7 16 3	
	27 19 8½	25 11 9½	2 7 11
Mixed soil—			
Wheat	14 18 7½	13 3 1	
Oats	12 16 7½	12 19 8	
Barley	13 19 11½	15 8 5	
	41 15 1½	41 11 2	3 11½
Heavy land—			
Wheat	17 18 5½	16 18 5	
Oats	14 11 5½	14 3 3	
Barley	16 4 3½	17 2 8	
	48 14 3½	48 4 4	9 11½

CASH RESULT OF GROWING ONE ACRE OF WHEAT, BARLEY, AND OATS ON EACH CLASS OF LAND.

	Wheat.		Barley.		Oats.	
	Cost of Production.	Cash Return.	Cost of Production.	Cash Return.	Cost of Production.	Cash Return.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Light land	11 4 4	10 1 11	8 17 3½	7 16 3	7 18 1	7 13 7½
Mixed soil	14 18 7½	13 3 1	13 19 11½	15 8 5	12 16 7½	12 19 8
Heavy land	17 18 5½	16 18 5	16 4 3½	17 2 8	14 11 5½	14 3 3
	44 1 5	40 3 5	39 1 6½	40 7 4	35 6 2	34 16 6½
Result	£3 18s. 0d. Loss.		£1 5s. 9½d. Profit.		9s. 7½d. Loss.	

The above figures do not allow anything for interest on capital or any return to the farmer for his own time and skill.

It will be seen from the above that the growing of corn is not at all likely to be a profitable business for the farmer if he is only to get the minimum prices guaranteed by the Government for his crops.

It is also certain that very little wheat will be sown during the coming autumn unless this guarantee is increased.

APPENDIX No. II.

Handed in by Professor R. G. WHITE in connection with his evidence given on September 16th, 1919.

UNIVERSITY COLLEGE OF NORTH WALES.—DEPARTMENT OF AGRICULTURE.

COLLEGE FARM.

ACCOUNTS FOR YEAR ENDING NOVEMBER 12TH, 1911.

CAPITAL ACCOUNT.

	£ s. d.	£ s. d.		£ s. d.
To Preliminary and Organization Expenses to date		66 15 5	By Donations and Subscriptions to date	4,095 19 0
„ Bank Interest on overdraft to Nov. 12th, 1910	316 13 5		„ Anglesey and Carnarvonshire Dairy Institute Fund (surplus handed over for improvement of breed of Welsh Black Cattle)	177 16 0
Less: Interest 1910–11	13 2 3			
		303 11 2		
		370 6 7		
1911.				
Nov. 12th. To Balance...		3,903 8 5		
		£4,273 15 0		£4,273 15 0

WORKING ACCOUNT.

1910.	£ s. d.	£ s. d.	By INCOME FROM	£ s. d.	£ s. d.
Nov. 12th. To Valuation of Stock, &c.		2,117 3 2	I. *Sale of Live Stock:*		
„ Expenditure on			Horses	455 11 0	
I. *Implements and Machinery*	249 4 10		Cattle	78 8 3	
		249 4 10	Sheep	840 7 7	
II. *Live Stock:*					1,374 6 10
Horses	303 1 0		II. *Sale of Produce:*		
Cattle	569 6 9		Dairy produce	689 5 1	
Sheep	24 4 3		Potatoes	3 2 6	
Pigs	19 19 6		Grain	0 3 0	
		916 11 6	Mangels	6 8 0	
III. *Feeding Stuffs, &c.:*					698 18 7
Feeding Stuffs	297 15 4		Government Grant		200 0 0
Seeds (Corn, Grass, Potatoes)	69 10 7		Grant from Carnarvonshire County Committee towards cost of experiments		20 0 0
Manure	129 16 6		Farm fees		42 0 0
		497 2 5	Service fees		50 0 0
Farm Valuation on entry		2,532 0 7	Miscellaneous receipts...		35 0 4
General College Account, Interest and Instalment of principal,—loan for buildings		110 2 6			£2,420 5 9
Wages		806 2 2½	1911.		
Rent		427 18 0	Nov. 12th. By Valuation of Stock, &c.		5,472 16 1
Rates and Taxes...		34 1 0			7,893 1 10
Furniture and Fittings		10 10 6	1911.		
Repairs and Renewals		41 10 5½	Nov. 12th. By Balance		444 6 4
Coal and Fuel		42 1 0			
Insurance		70 2 6			
Valuers' Fees		18 12 9			
Bank Charges		1 5 0			
Discount...		2 4 3			
Service Fees		29 17 6			
Entry fees and Subscriptions Agricultural Societies		6 11 3			
Railway Carriage		21 1 1			
Grazing Sheep		102 4 3			
Residence of Professor of Agriculture at Llanfairfechan		69 8 0			
Removal from Madryn		4 8 4			
Law Costs, Lease of College Farm and land for Cottages		80 15 0			
Sundries:					
Vet. attendance and Medicine for Stock	18 15 1				
Travelling expenses	61 17 4½				
Other items	65 17 7½				
		146 10 1			
		£8,337 8 2			£8,337 8 2

BALANCE SHEET.

Liabilities.	£ s. d.	£ s. d.	*Assets.*	£ s. d.	£ s. d.
To Capital Account,—Balance... ...		3,903 8 5	By Valuation on November 12th:		
„ Balance due to Bank:			Horses	683 0 0	
Farm Account	364 19 1		Cattle	1,107 15 0	
Farm Sundries Account... ...	171 19 6		Sheep	1,772 4 0	
		536 18 7	Pigs	22 10 0	
„ Surplus on Working Account to November 12th, 1910	1,731 15 5		Roots	412 10 5	
Less: Deficit on Working Account for the year ...	444 6 4		Hay	467 0 0	
		1,287 9 1	Straw	80 14 0	
„ College General Account, Balance of loan ...		1,918 8 6	Manure	205 8 3	
			Implements, Machinery, Tools, &c.	553 1 11	
			Granary	168 12 6	
					5,472 16 1
			„ Milk money in hand		9 13 10
			„ Amounts due to Farm on November 12th ...		245 6 2
			„ Expenditure on Farm Buildings to this date (less amount repaid £57 3s. 6d.)		1,918 8 6
		£7,646 4 7			£7,646 4 7

ACCOUNTS FOR YEAR ENDING NOVEMBER 12TH, 1912.

CAPITAL ACCOUNT.

	£ s. d.	£ s. d.
To Preliminary and Organization Expenses to date		66 15 5
„ Bank Interest on overdraft to Nov. 12th, 1911	303 11 2	
„ Bank Interest on overdraft to Nov. 12th, 1912	7 2 6	
		310 13 8
1912.		377 9 1
Nov. 12th. To Balance...		3,896 5 11
		£4,273 15 0

	£ s. d.
By Donations and Subscriptions to date	4,095 19 0
„ Anglesey and Carnarvonshire Dairy Institute Fund (surplus handed over for improvement of breed of Welsh Black Cattle) ...	177 16 0
	£4,273 15 0

WORKING ACCOUNT.

1911.	£ s. d.	£ s. d.
Nov. 12th. To Valuation of Stock, &c.		5,472 16 1
„ Expenditure on		
I. Implements and Machinery	12 3 1	
		12 3 1
II. Live Stock:		
Horses	78 10 0	
Cattle	181 13 10	
Sheep	10 8 8	
		270 12 6
III. Feeding Stuffs, &c.:		
Feeding Stuffs	521 2 2	
Seeds (Corn, Grass, Potatoes)	52 0 11	
Manure	125 14 3	
		698 17 4
U.C.N.W. General Account, Interest and Instalment principal,—loan for buildings		126 5 0
Wages		834 18 8
Rent		427 18 0
Rates and Taxes		64 11 6
Repairs and Renewals		65 11 4
Coal and Fuel		52 0 11
Insurance		61 15 3
Valuer's Fees		5 5 0
Bank Charges		1 9 9
Discount		1 10 0
Debts not recoverable		1 7 0
Service Fees		34 2 6
Entry Fees and Subscriptions Agricultural Societies		10 15 9
Railway Carriage		18 16 9
Grazing Sheep		60 1 0
Fencing		11 3 0
Sundries:		
Vet. Attendance and Medicine for Stock	24 12 0	
Travelling Expenses	46 1 0	
Other Items	61 4 5	
		131 17 5
		£8,363 17 10

By Income from	£ s. d.	£ s. d.
I. Sale of Live Stock:		
Horses	182 0 0	
Cattle	330 18 3	
Sheep	1,059 19 3	
Pigs	45 5 0	
		1,618 2 6
II. Sale of Produce:		
Dairy Produce	733 0 8	
Potatoes	77 15 9	
Hay and Grain... ...	0 8 0	
Swedes	0 5 6	
		811 9 11
Government Grant		200 0 0
Grant from Carnarvonshire County Committee towards cost of experiments		20 0 0
Farm Fees		37 16 0
Miscellaneous Receipts		23 11 11
		2,711 0 5
1912.		
Nov. 12th. By Valuation of Stock, &c.		5,119 11 4
		7,830 11 9
1912.		
Nov. 12th. By Balance		533 6 2
		£8,363 17 10

BALANCE SHEET.

Liabilities.

	£ s. d.	£ s. d.
To Capital Account,—Balance ...		3,896 5 11
„ Balance due to Bank:		
Farm Account	877 9 7	
Less, Balance in hand, Farm Sundries Account	289 19 8	
		587 9 11
„ Surplus on Working Account to Nov. 12th, 1911	1,287 9 1	
Less, Deficit on Working Account for the year... ...	533 6 2	
		754 2 11
„ U.C.N.W. General Account, Balance of loan		2,145 12 10
		£7,383 11 7

Assets.

	£ s. d.	£ s. d.
By Valuation on November 12th:		
Horses	713 0 0	
Cattle	1,123 10 0	
Sheep	1,616 6 0	
Roots	309 7 8	
Hay	255 12 3	
Corn in Rick	152 5 6	
Straw	35 10 0	
Manure and manurial value of feeding stuffs and unexhausted manurial value of artificial manure	277 8 0	
Granary	105 0 0	
Implements, Machinery, Tools, &c	531 11 11	
		5,119 11 4
„ Milk money in hand		2 12 10½
„ Amounts due to Farm on November 12th ...		115 14 6½
„ Expenditure on Farm Buildings to this date (£2,265 2*s.* 4*d.* less amount repaid, £119 9*s.* 6*d.*)		2,145 12 10
		£7,383 11 7

ACCOUNTS FOR YEAR ENDING NOVEMBER 12TH, 1913.

CAPITAL ACCOUNT.

	£ s. d.	£ s. d.		£ s. d.
To Preliminary and Organization Expenses to date		66 15 5	By Donations and Subscriptions to date	4,273 15 0
„ Bank Interest on overdraft from 1898 to Nov. 12th, 1912	310 13 8			
„ Ditto for the year ending Nov. 12th, 1913	16 1 4			
		326 15 0		
		£393 10 5		
1913. Nov. 12th. To Balance		3,880 4 7		
		£4,273 15 0		£4,273 15 0

WORKING ACCOUNT.

	£ s. d.	£ s. d.		£ s. d.	£ s. d.
1912. Nov. 12th. To valuation of Stock, &c.		5,119 11 4	By Income from		
„ Expenditure on			*I. Sale of Live Stock:*		
I. Implements and Machinery	9 10 0		Horses	63 10 0	
		9 10 0	Cattle	395 9 0	
II. Live Stock:			Sheep	1,053 7 1	
Cattle	295 7 0				1,512 6 1
Sheep	87 18 0		*II. Sale of Produce:*		
Pigs	6 0 0		Dairy Produce	747 2 8	
		389 5 0	Potatoes	25 10 7	
III. Feeding Stuffs, &c.:			Grain	56 8 2	
Feeding Stuffs	430 8 2		Other Produce (Mangels and Swedes)	1 10 9	
Hay, Straw, Litter, &c....	56 3 8				830 12 2
Seeds	70 1 2		Government Grant		200 0 0
Manure	75 16 0		Grant from Carnarvonshire County Committee ...		20 0 0
		632 9 0	Amount recovered from the Board of Agriculture and Fisheries towards cost of special experiments		109 17 6
L.C.N.W. General Account, Interest and Instalment of principal,—loan for buildings ...		124 17 3	Farm Fees		31 10 0
Wages		809 16 9	Prizes at Agricultural Shows...		18 1 0
Rent		427 18 0	Miscellaneous receipts		11 7 5
Rates and Taxes		49 7 6			£2,733 14 2
Repairs and Renewals		47 7 6	1913.		
Maintenance of Buildings, &c.		36 11 7	Nov. 12th. By Valuation of Stock, &c.		5,368 8 6
Heating and Lighting		18 0 10			
Fuel for Engine		17 19 0			
Insurance		61 16 1			
Valuer's Fee		5 5 0			
Bank Charges		0 16 8			
Service Fees		42 18 6			
Entry Fees and Subscriptions Agricultural Societies		14 1 0			
Railway Carriage		21 8 10			
Grazing Sheep		61 15 0			
Fencing		3 2 6			
Discount		0 18 10			
Apparatus for Milk Testing		8 7 1			
Sundries:					
Veterinary Attendance and Medicine for Stock	22 15 2				
Travelling Expenses	30 14 9				
Other Items	51 4 7				
		104 14 6			
		£8,007 12 9			
1913. Nov. 12th. To Balance		94 9 11			
		£8,102 2 8			£8,102 2 8

BALANCE SHEET.

Liabilities.	£ s. d.	£ s. d.	*Assets.*	£ s. d.	£ s. d.
To Capital Account,—Balance ...		3,880 4 7	By Valuation on November 12th:		
„ Balance due to Bank:			Horses	694 0 0	
Farm Account	1,059 0 4		Cattle	1,294 10 0	
Less, Balance in hand, Farm Sundries Account	179 11 1		Sheep	1,666 11 0	
		879 9 3	Pigs	8 8 0	
„ Surplus on Working Account to Nov. 12th, 1912	754 2 11		Green Crops and Potatoes ...	245 6 6	
„ Ditto to Nov. 12th, 1913	94 9 11		Unexhausted manurial value of feeding stuffs, home-grown grain and artificial manures	357 16 0	
		848 12 10	Hay in Ricks	393 0 0	
„ L.C.N.W. General Account, Balance of Loan		2,170 4 0	Straw and Bracken	17 10 0	
			Grain Ricks	163 12 0	
			Granary	13 5 0	
			Implements, Machinery, Tools, &c.	514 10 0	
					5,368 8 6
			„ Milk money in hand		0 4 6½
			„ Amounts due to Farm on November 12th ...		239 13 7½
			„ Expenditure on Farm Buildings to this date (£2,323 18*s.* 0*d.*, less amount repaid £153 14*s.* 9*d.*)		2,170 4 0
	£7,778 10 8				£7,778 10 8

NOTE.—As will be seen from the above, the season of 1913 was a fairly good one for the farm, the prices of stock being high and the crops of hay particularly good. It must, however, be pointed out that for many years any surplus on the ordinary working of the farm will have to be devoted towards improving its general condition. For instance, serious expenditure will have to be incurred on drainage, and repairs of fences, and, in particular, the *ffridd*, or enclosed hill ground, will require heavy outlay.

ACCOUNTS FOR YEAR ENDING NOVEMBER 12TH, 1914.

CAPITAL ACCOUNT.

	£ s. d.	£ s. d.
To Preliminary and Organization Expenses to date		68 15 5
„ Bank Interest on overdraft from 1888 to Nov. 12th, 1913	326 15 0	
„ Ditto for the year ending Nov. 12th, 1914	24 19 7	
		351 14 7
1914.		
Nov. 12th. To Balance		118 10 0
		3,855 5 0
		£4,273 15 0

	£ s. d.	£ s. d.
By Donations and Subscriptions to date		1,273 15 0
		£4,273 15 0

WORKING ACCOUNT.

1913.	£ s. d.	£ s. d.
Nov. 12th. To Valuation of Stock, &c.		5,368 8 6
„ Expenditure on		
I. New Implements & Machinery	7 11 5	
		7 11 5
II. Live Stock:		
Horses	26 5 0	
Cattle	30 15 2	
Sheep	48 19 10	
Pigs	13 1 11	
		179 1 11
III. Feeding Stuffs, &c.:		
Feeding Stuffs	582 9 0	
Straw, Litter, &c.	12 16 0	
Seeds	59 12 7	
Manure	80 5 11	
		735 3 6
Wages		820 16 3
Farm Contribution under National Health Insurance Act		9 7 10
Rent		428 13 0
U.C.N.W. General Account, Interest and Instalment of principal—loan for buildings		132 2 0
Rates and Taxes		52 12 0
Addition to Farm Buildings		74 0 0
Maintenance of Buildings, &c.		15 13 9
Repairs and Renewals		42 2 7
Heating and Lighting		15 6 5
Fuel for Engine		11 13 8
Insurance:		
Fire—Buildings, Cottages, &c.	5 10 9	
Crops, Live Stock, &c.	10 0 3	
Live Stock	13 15 10	
Fidelity Guarantee Bond	1 14 0	
Workmen's Compensation Act	5 16 6	
		36 17 4
Valuer's Fee		5 5 0
Bank Charges		2 7 1
Service Fees		31 11 0
Entry Fees and Subscriptions Agricultural Societies		26 9 7
Railway Carriage		35 6 6
Grazing Sheep		62 10 0
Fencing		23 0 7
Furniture and Fittings		5 19 0
Draining—		
Pipes	34 7 11	
Special Labour	53 12 10	
		88 0 9
Sundries:		
Veterinary Attendance and Medicine for Stock	17 1 3	
Travelling Expenses	38 7 5	
Other Items	49 16 4	
		103 5 0
1914.		
Nov. 12th. To Balance		8,313 4 8
		115 7 8
		£8,428 12 4

BY INCOME FROM	£ s. d.	£ s. d.
1. *Sale of Live Stock:*		
Horses	388 11 0	
Cattle	417 18 3	
Sheep	1,131 6 8	
Pigs	32 6 3	
		1,969 11 2
II. *Sale of Produce:*		
Dairy Produce	741 17 11	
Potatoes	28 13 6	
Grain	22 2 [illegible]	
Other Produce (Mangels and Swedes)	0 16 3	
		793 10 0
Board of Agriculture—Grant		200 0 0
Farm Fees		31 10 0
Prizes at Agricultural Shows		[illegible] 15 0
Miscellaneous Receipts		12 17 10
		3071 4 0
1914.		
Nov. 12th. By Valuation of Stock, &c.		5,357 8 4
		£8,428 12 4

BALANCE SHEET.

Liabilities.	£ s. d.	£ s. d.
To Capital Account—Balance		3,855 5 0
„ Balance due to Bank:		
Farm Account	748 1 8	
Less: Balance in hand, Farm Sundries Account	63 9 4	
		684 12 4
„ Surplus on Working Account to Nov. 12th, 1913	848 12 10	
„ Ditto to Nov. 12th, 1914	115 7 8	
		964 0 6
„ U.C.N.W. General Account, Balance of Loan		2,286 5 3
		£7,790 3 1

Assets.	£ s. d.	£ s. d.
By Valuation on November 12th:		
Horses	529 0 0	
Cattle	1,326 10 0	
Sheep	1,760 9 0	
Pigs	15 0 0	
Granary	30 0 0	
Green Crops and Potatoes	225 13 4	
Unexhausted manurial value of feeding stuffs, home-grown grain and artificial manures	380 16 10	
Hay	339 5 0	
Implements and Machinery	408 15 9	
Grain in ricks	285 17 5	
Straw ditto	9 1 0	
		5,357 8 4
„ Milk money in hand		1 11 7
„ Amounts due to Farm on Nov. 12th		144 17 10
„ Expenditure on Farm Buildings to this date (£2,479 1s. 0d., less amount repaid £192 15s. 9d.)		2,286 5 3
		£7,790 3 1

The year 1913-14 was a good one for the farm, though the poor corn crops of the previous year made it necessary to incur large expenditure on feeding stuffs. During the year a considerable amount of drainage was carried out and a new feeding shed was erected. The cost of both these improvements has been written off entirely, though it is anticipated that the drainage will yield good returns for many years to come, and that compensation will be obtainable in respect of the shed at the end of the lease. The valuation was made on practically the same basis as those of previous years and not on the abnormal values prevailing in the autumn of 1914.

ACCOUNT FOR YEAR ENDING NOVEMBER 12TH, 1915.

CAPITAL ACCOUNT.

	£ s. d.	£ s. d.
To Preliminary and Organisation expenses to date		66 15 5
„ Bank Interest on overdraft from 1898 to November 12th, 1914	351 14 7	
„ Ditto for the year ending November 12th, 1915	25 14 6	
	377 9 1	
1915.		444 4 6
Nov. 12th. To Balance		3,829 10 6
		£4,273 15 0

	£ s. d.
By Donations and Subscriptions to date	4,273 15 0
	£4,273 15 0

WORKING ACCOUNT.

	£ s. d.	£ s. d.
1914.		
Nov. 12th. To Valuation of Stock, &c.		5,357 8 4
„ Expenditure on		
I. New Implements and Machinery	45 17 6	45 17 6
II. Live Stock:		
Horses	27 0 0	
Cattle	299 13 1	
Sheep	36 8 6	363 1 7
III. Feeding Stuffs, &c.:		
Feeding Stuffs	661 8 2	
Straw, Litter, &c.	6 3 6	
Seeds	74 4 4	
Manure	83 4 2	825 0 2
Wages		855 12 9
Farm Contribution under National Health Insurance Act		8 14 9
Rent		428 8 0
U.C.N.W. General Account—Interest and Instalment of principal, loan for buildings		132 2 0
Rates and Taxes		54 4 3
Additions to Farm Buildings		407 19 10
Maintenance of Buildings, &c.		48 15 8
„ Fences, Gates, &c.		34 4 9
Stack covers, Sheep racks, Saddlery repairs, and renewals of Implements		99 19 7
Fruit Trees		10 18 9
Heating and Lighting		15 2 0
Fuel for Engine		12 0 0
Insurance:		
Fire—Buildings, Cottages, &c.	5 8 11	
Crops, Live Stock, &c.	9 16 8	
Live Stock	9 2 6	
Fidelity Guarantee Bond	2 0 0	
Workmen's Compensation Act	6 2 6	32 10 5
Set of Shire Horse Stud Books		5 15 0
Valuer's fee		5 5 0
Anglesey Western Co-operative Society—2 shares		1 0 0
Bank Charges		1 2 11
Architect's Fees		27 7 4
Service Fees		29 1 0
Entry Fees and Subscriptions Agricultural Societies		16 15 11
Railway Carriage		19 6 0
Amount written off (not recoverable)		0 2 0
Grazing Sheep		62 0 0
Furniture and Fittings		4 1 4
Draining—Pipes	14 2 6	
Special labour	12 6 10	26 8 10
Sundries—Veterinary attendance and Medicine for Stock	4 15 2	
Travelling expenses	34 18 5	
Other items	60 18 9	100 12 4
1915.		£9,030 18 0
Nov. 12th. To Balance		49 12 2
		£9,080 10 2

	£ s. d.	£ s. d.
BY INCOME FROM		
I. Sale of Live Stock:		
Cattle	628 12 3	
Sheep	1,165 11 1	
Pigs	44 6 3	1,838 9 7
II. Sale of Produce:		
Dairy Produce	848 2 0	
Potatoes	66 7 0	
Grain	161 17 11	
Other produce (Mangels, Swedes, &c.)	6 13 11	1,083 0 10
Board of Agriculture and Fisheries Grant		200 0 0
„ „ „ Grant from Development Fund towards cost of additions to Buildings		120 0 0
Farm Fees		31 10 0
Prizes at Agricultural Shows		28 8 6
Miscellaneous Receipts		13 6 4
		£3,314 15 3
1915.		
Nov. 12th. By Valuation of Stock, &c.		5,765 14 11
		£9,080 10 2

BALANCE SHEET.

Liabilities.	£ s. d.	£ s. d.
To Capital Account—Balance		3,829 10 6
„ Balance due to Bank:		
Farm Account	1,071 8 7	
Farm Sundries Account	23 4 2	1,094 12 9
„ Surplus on Working Account to November 12th, 1914	964 0 6	
Ditto to November 12th, 1915	49 12 2	1,013 12 8
„ U.C.N.W. General Account—Balance of Loan		2,245 12 3
		£8,183 8 2

Assets.	£ s. d.	£ s. d.
By Valuation on November 12th:		
Horses	590 0 0	
Cattle	1,359 0 0	
Sheep	1,595 2 6	
Pigs	54 0 0	
Granary	105 2 9	
Green Crops and Potatoes	245 6 0	
Unexhausted manurial value of feeding stuffs, home-grown grain and artificial manures	447 10 0	
Hay	353 13 4	
Grain in ricks	507 19 9	
Straw	29 10 7	
Unthreshed Linseed	12 0 0	
Implements and Machinery	466 10 0	5,765 14 11
„ Milk money in hand		1 0 10½
„ Amounts due to Farm on November 12th		171 0 1½
„ Expenditure on Farm Buildings to this date	2,479 1 0	
Less amounts repaid 1911 £57 3 6		
1912 62 6 0		
1913 34 4 6		
1914 39 1 9		
1915 40 13 0	233 8 9	2,245 12 3
		£8,183 8 2

ACCOUNTS FOR YEAR ENDING NOVEMBER 12TH, 1916.

CAPITAL ACCOUNT.

	£ s. d	£ s. d.
To Preliminary and Organisation expenses to date		66 15 5
„ Bank Interest on overdraft from 1898 to November 12th, 1915	377 9 1	
„ Ditto for the year ending November 12th, 1916	33 1 10	
		410 10 11
1916.		477 6 4
November 12th. To Balance		3,896 8 8
		£4,373 15 0

	£ s. d.
By Donations and Subscriptions to date	4,373 15 0
	£4,373 15 0

WORKING ACCOUNT.

1915.	£ s. d	£ s. d.
November 13th. To Valuation of Stock, &c. ..		5,765 14 11
„ Expenditure on		
I. *New Implements and Machinery*	17 17 8	
		17 17 8
II. *Live Stock:*		
Cattle	439 8 6	
Sheep	63 4 0	
Pigs	12 18 9	
		514 11 3
III. *Feeding Stuffs, &c.:*		
Feeding Stuffs	695 13 0	
Hay, Straw, Litter, &c.	3 18 0	
Seeds	122 11 5	
Manure	146 12 7	
		938 15 0
Wages..		990 0 6
Farm Contribution under National Health Insurance Act ..		10 1 4
Rent	428 8 0	
Less Amount due from B/A for rent for Forest Seed Beds .. 3 10 0		
Do. Professor Story, Forest Nursery (2 years) 2 10 0		
	6 0 0	
		422 8 0
U.C.N.W. General Account—Interest and Instalment of principal, loan for buildings		132 2 0
Rates and Taxes		52 17 0
Additions to Farm Buildings		12 2 6
Maintenance of Buildings, &c.		66 15 1
Maintenance of fences, gates, &c.		1 2 0
Repairs and Renewals		115 15 1
Heating and Lighting		23 9 4
Fuel for Engine		18 13 3
Insurance: *Fire*—Buildings, Cottages, &c... ..	6 12 3	
Crops, Live Stock, &c	9 16 6	
Live Stock	13 8 2	
Fidelity Guarantee Bond ..	1 14 0	
Workmen's Compensation Act	6 14 4	
		38 5 3
Valuer's Fee		5 5 0
Bank Charges		1 4 9
Service Fees		29 7 6
Entry Fees and Subscriptions Agricultural Societies		25 14 0
Railway Carriage		59 3 8
Grazing Sheep		63 10 0
Draining—Pipes	26 18 2	
Special Labour	37 5 1	
		64 3 3
Sundries—Veterinary attendance and Medicine for Stock	27 0 2	
Travelling expenses	25 8 7	
Other items	75 8 6	
		127 17 3
1916.		9,526 15 7
November 12th. To Balance		649 1 2
		£10,175 16 9

	£ s. d	£ s. d.
By INCOME FROM		
I. *Sale of Live Stock:*		
Horses	70 0 0	
Cattle	1,027 12 5	
Sheep	1,319 16 1	
Pigs	142 10 10	
		2,559 19 4
II. *Sale of Produce:*		
Dairy Produce	825 14 11	
Potatoes	84 14 8	
Hay	5 5 0	
Grain	199 11 8	
Other produce, Swedes, Mangels, &c.	4 0 3	
		1,119 7 3
Board of Agriculture and Fisheries Grant..		200 0 0
Farm Fees		33 2 0
Prizes at Agricultural Shows		80 10 0
Miscellaneous Receipts		11 11 0
		3,994 9 7
1916.		
November 12th. By Valuation of Stock, &c.		6,181 7 2
		£10,175 16 9

BALANCE SHEET.

Liabilities.	£ s. d	£ s. d.
To Capital Account—Balance		3,896 8 8
„ Balance due to Bank:		
From Account	954 7 0	
Farm Sundries Account	11 19 6	
		966 6 6
„ Surplus on Working Account to Nov. 12th, 1915	1,013 12 8	
Do. to November 12th, 1916	649 1 2	
		1,662 13 10
„ U.C.N.W. General Account—Balance of Loan		2,203 6 9
		£8,028 15 9

Assets.	£ s. d	£ s. d.
By Valuation on November 12th:		
Horses	630 0 0	
Cattle	1,207 0 0	
Sheep	1,596 19 6	
Pigs	41 0 0	
Granary	114 18 3	
Green Crops and Potatoes..	408 0 8	
Hay	415 19 10	
Straw	17 10 0	
Corn in Ricks	713 17 0	
Manures and unexhausted value of Manures and Feeding Stuffs	429 11 11	
Implements	439 7 0	
Wool	168 0 0	
		6,181 7 2
„ Milk Money in hand		2 18 0½
„ Amounts due to Farm on November 12th ..		241 3 9½
„ Expenditure on Farm Buildings to this date	2,479 1 0	
Less: Amounts Repaid		
1911 £57 3 6		
1912 62 6 0		
1913 34 4 6		
1914 39 1 9		
1915 40 13 0		
1916 42 5 6		
	275 14 3	
		2,203 6 9
		£8,628 15 9

N.B.—As in the last two years, the valuation was conducted, as far as possible, on a pre-war basis.

ACCOUNTS FOR YEAR ENDING NOVEMBER 12TH, 1917.

CAPITAL ACCOUNT.

	£ s. d.	£ s. d.		£ s. d.
To Preliminary and Organisation Expenses to date		66 15 5	By Donations and Subscriptions to date	4,273 15 0
„ Bank Interest on overdraft from 1898 to November 12th, 1916	410 10 11			
„ Ditto for the year ending November 12th, 1917	8 4 0			
		418 14 11		
		485 10 4		
1917. Nov. 12th. To Balance		3,788 4 8		
		£4,273 15 0		£4,273 15 0

WORKING ACCOUNT.

	£ s. d.	£ s. d.		£ s. d.	£ s. d.
1916 Nov. 13th. To Valuation of Stock, &c.		6,181 7 2	By INCOME FROM		
„ Expenditure on			*I. Sale of Live Stock:*		
I. New Implements and Machinery	26 3 0		Horses	57 0 0	
		26 3 0	Cattle	932 7 11	
II. Live Stock:			Sheep	1,790 8 8	
Cattle	196 15 0		Pigs	46 19 8	
Sheep	37 15 0				2,826 16
Pigs	15 0 0		*II. Sale of Produce:*		
		249 10 0	Dairy Produce	798 3 0	
III. Feeding Stuffs, &c.:			Potatoes	213 15 8	
Feeding Stuffs	621 18 7		Grain	304 3 3	
Seeds	142 14 8		Other produce (Swedes, Mangolds, Chicory, &c.)	13 8 0	
Manure	201 7 4				1,329 9 11
		966 0 7	Board of Agriculture and Fisheries—Grant		200 0 0
Wages		1,013 6 3	Ditto ditto and Executive Committees—Training of National Service Pupils	47 5 0	
Farm Contribution under National Health Insurance Act		9 1 6	*Less* amount paid for Board, Lodgings, &c.	38 11 9	
Rent	430 13 0				8 13 3
Less Amount due from Board of Agriculture and Fisheries for Forest Seed Beds	3 10 0		Prizes at Agricultural Shows		32 10 6
Do. Forestry Department—Brynmeddyg Nursery	1 5 0		Miscellaneous Receipts		55 19 3
	4 15 0				4,453 9 2
		125 18 0	1917. Nov. 12th. By Valuation of Stock, &c.		6,098 0 3
U.C.N.W. General Account—Interest and part repayment of principal, loan for buildings		632 2 0			
Rates and Taxes		58 6 0			
Maintenance of Buildings, &c.		24 7 4			
Repairs and Renewals		32 4 8			
Heating and Lighting		41 13 7			
Insurance: *Fire*—Buildings, Cottages, &c.	30 13 6				
Live Stock	7 17 6				
Fidelity Guarantee Bond	1 12 9				
Workmen's Compensation Act	8 3 6				
		48 7 3			
Valuer's Fee		5 5 0			
Bank Charges		2 9 8			
Salaries		29 6 0			
Entry Fees and Subscriptions—Agricultural Societies		9 2 9			
Railway Carriage		33 16 8			
Grazing Sheep		54 5 0			
Debts not recoverable		1 2 0			
Sundries—Veterinary attendance and medicine for stock	13 19 3				
Travelling expenses	19 6 11				
Other items	84 1 9				
		117 7 5			
		9,961 4 10			
1917. Nov. 12th. To Balance		590 4 7			
		£10,551 9 5			£10,551 9 5

BALANCE SHEET.

Liabilities.	£ s. d.	£ s. d.	*Assets.*	£ s. d.	£ s. d.
To Capital Account—Balance		3,788 4 8	By Valuation on November 12th:		
U.C.N.W. General Account Balance of Loan ..		1,659 7 5	Horses	640 0 0	
„ Surplus on Working Account to Nov. 12th, 1916	1,662 13 10		Cattle	1,227 0 0	
„ Do. to Nov. 12th, 1917	590 4 7		Sheep	1,282 16 0	
		2,252 18 5	Pigs	53 10 0	
„ Balance due to Bank:			Granary	176 11	
Farm Account	792 18 4		Grain in ricks and straw	948 12 0	
Less amount in hand — Farm Sundries Account	473 19 10		Hay	288 15 0	
		318 18 6	Green Crops and Potatoes	385 0 0	
			Wool	160 13 2	
			Manure and unexhausted value of manure and feeding stuffs . ..	513 10 11	
			Implements	421 12 0	
					6,098 0 3
			„ Milk money in hand	.. .. ..	3 17 7
			„ Amounts due to Farm on November 12th ..	.. .. ..	258 3 9
			„ Expenditure on Farm Buildings to this date ..	2,479 1 0	
			Less amounts repaid 1911 .. .. £57 3 6		
			1912 .. .. 62 6 0		
			1913 .. .. 54 4 6		
			1914 .. .. 39 1 9		
			1915 .. .. 40 13 0		
			1916 .. .. 42 5 6		
			1917 .. .. 543 19 4		
				819 13 7	
					1,659 7 5
	£3,019 9 0				£3,019 9 0

ACCOUNTS FOR YEAR ENDING NOVEMBER 12TH, 1918.

CAPITAL ACCOUNT.

	£ s. d.	£ s. d.
To Preliminary and Organisation expenses ..	66 15 5	
„ Bank Interest on overdraft from 1898 to Nov. 12th, 1917	418 14 11	
	485 10 4	
Less: Transferred from Working Account to Nov. 12th, 1918, to refund	485 10 4	
1918.		
Nov. 12th. To Balance		..£4,273 15 0
		£4,273 15 0

	£ s. d.
By Donations and Subscriptions to date	..£4,273 15 0
	£4,273 15 0

WORKING ACCOUNT.

	£ s. d.	£ s. d.
1917.		
Nov. 12th. To Valuation of Stock, &c.		6,098 0 3
„ Expenditure on		
I. *New Implements and Machinery*	19 9 0	
		19 9 0
II. *Live Stock:*		
Mountain Ponies	102 1 6	
Cattle	230 10 0	
Sheep	14 16 6	
Pigs	22 17 6	
		469 5 6
III. *Feeding Stuffs, &c.:*		
Feeding Stuffs	121 15 7	
Seeds	276 4 5	
Manure	102 2 9	
		500 2 9
Wages	.. ..	1,179 0 11
Farm Contribution under National Health Insurance Act ..		8 11 0
Rent	.. ..	431 3 0
U.C.N.W. General Account:		
Interest on loan for buildings	61 10 0	
Part repayment of loan	1,159 7 5	
		1,220 17 5
Rates and Taxes	.. ..	66 2 6
Repairs and Renewals	.. ..	120 11 6
Heating and Lighting	.. ..	28 19 10
Fuel for Engine	.. ..	24 13 7
Insurance: *Fire*—Buildings, Cottages, &c... ..	34 6 2	
Live Stock	6 4 8	
Fidelity Guarantee Bond	1 14 0	
Workmen's Compensation Act ..	7 2 3	
		49 7 1
Valuer's Fee	.. ..	5 5 0
Bank Charges	.. ..	1 3 0
Service Fees	.. ..	21 8 0
Entrance Fees and Subscriptions Agricultural Societies ..		9 15 0
Railway Carriage	.. ..	35 6 11
Grazing Sheep	.. ..	50 4 8
Debts not recoverable	.. ..	1 14 0
Sundries—Veterinary attendance and medicine for stock (payments for two years)	44 17 4	
Travelling expenses	29 2 11	
Other items	76 12 8	
		150 12 11
Capital Account transfer for refund of preliminary expenses and interest on overdraft to Nov. 12th, 1917 ..		.. 485 10 4
		£10,977 4 2
1918.		
Nov. 12th. To Balance		.. 483 7 7
		£11,460 11 9

	£ s. d.	£ s. d.
BY INCOME FROM		
I. *Sale of Live Stock:*		
Horses	320 14 6	
Cattle	885 8 6	
Sheep	978 9 2	
Wool	191 2 8	
Pigs	180 15 3	
		2,556 10 1
II. *Sale of Produce:*		
Dairy Produce	867 15 8	
Potatoes	221 5 11	
Grain	779 10 9	
Other produce (Straw, Cabbages, Mangels, &c.)	7 3 11	
		1,875 16
Board of Agriculture and Fisheries and War Agricultural Committees,—Training of National Service Pupils	242 17 6	
Less: Amount paid for board, lodging, &c. ..	194 8 6	
		48 9
Prizes	.. ..	5 11
Miscellaneous Receipts	.. ..	80 13 1
Hiring fees for Welsh Rams to Sheep Improvement Societies		12 0
Bank Interest		21 1
		£4,600 2
1918		
Nov. 12th. By Valuation of Stock, &c.		6,860 9
		£11,460 11

BALANCE SHEET.

Liabilities.	£ s. d.	£ s. d.
To Capital Account—Balance..		1,273 15 0
„ U.C.N.W. General Account Balance of Loan..		500 0 0
„ Net Surplus on Working Account from 1898 to November 12th, 1917	2,252 18 5	
„ Do. for Year ending Nov. 12th, 1918	483 7 7	
		2,736 6 0
„ Balance due to Bank:		
Farm Account	451 14 8	
Less: Amount in hand Farm Sundries Account	117 0 3	
		334 14 5
		£7,844 15 5

Assets.	£ s. d.	£ s. d.
By Valuation on November 12th:		
Horses	510 0 0	
Mountain Ponies..	79 0 0	
Cattle	1,490 0 0	
Sheep	1,326 8 0	
Pigs..	18 0 0	
Implements	398 1 0	
Wool	150 0 0	
Green Crops and Potatoes	449 10 0	
Grain in Ricks and Straw	1,572 12 3	
Hay	549 0 0	
Manure and unexhausted value of manure and feeding stuffs	319 18 4	
		6,860 9
„ Milk money in hand		16 8
„ Amount due to Farm on November 12th ..		461 19
„ Balance in hand—Petty Cash Account ..		5 18
„ Expenditure on Farm Buildings to this date	2,479 1 0	
Less: Amounts repaid 1911 .. £57 3 6		
1912 .. 62 6 0		
1913 .. 34 4 6		
1914 .. 39 1 9		
1915 .. 40 13 0		
1916 .. 42 5 6		
1917 .. 543 19 4		
1918 .. 1,159 7 5		
	1,979 1 0	
		500 0
		£7,844 15

APPENDIX III.

Handed in by Mr. H. Armour and Mr. G. G. Mercer (representing the Scottish Chamber of Agriculture) in connection with their evidence given on 17th September, 1919.

Cost per Acre of Growing Potatoes in Ayrshire for Early Market, Crop 1919.

	£	s.	d.
Rent, Rates, Taxes, &c., for three-fourths of year	2	13	6
Manures.			
10 tons Dung at 14s. per ton £7 0 0			
Artificial Manure, 15 cwts. at 10s. 7 10 0			
	14	10	0
Seed.			
30 cwts. at 8s. per cwt.	12	0	0
Labour			
Ploughing land £1 5 0			
Harrowing and Cultivating parts 0 7 6			
Drilling, Sowing, Manure and covering 0 15 0			
Carting Manure and Seed in boxes 0 5 0			
Planting out of boxes 0 8 6			
Saddle harrowing drills 0 2 6			
Grubbing twice 0 17 6			
Hoeing and weeding 0 17 6			
Ridging up drills 0 8 6			
	5	7	0
Sundries.			
Upkeep and depreciation of sprouting boxes £0 3 6			
" " of implements 0 4 0			
Depreciation in value of horses 0 10 0			
Proportion of general expenses 1 5 0			
Interest on capital... 1 10 0			
Coals and housing of diggers 0 5 6			
Cartage of crop, &c. 1 3 6			
	5	1	6
Digging.			
Lifting by graip, tools and barrels, etc.	8	17	0
	£48	9	0

Note.—Potatoes are grown on same land year after year and any residual value of manure is carried forward to next crop.

A catch crop is usually grown and consumed on the land, three-fourths of the rent, rates and taxes are charged against the potato crop.

The digging expenses are those actually paid by a firm of dealers during this season in lifting about 200 acres.

Cost per Acre of Growing Potatoes in Forfarshire, 1918 Crop.

	£	s.	d.
Rent, Rates and Taxes	1	15	0
Dung—20 tons at 10s., less 1s. 3d. for unexhausted values	6	13	4
Artificials	3	0	0
Seed	8	0	0
Labour.			
Ploughing £1 8 0			
Cultivating 1 8 0			
Harrowing 0 5 0			
Opening drills 0 7 0			
Sowing manure 0 3 0			
Carting dung and spreading 2 10 0			
Planting and carting seed 0 7 0			
Covering 0 7 6			
Grubbing and covering (2) 1 15 0			
Hoeing 0 10 0			
Lifting and pitting 4 10 0			
Straw and winter coating 1 5 0			
Dressing 1 15 6			
Carting to station 1 15 0			
	18	5	6
Interest	1	0	0
Proportion of management and sundry expenses	2	0	0
	£40	13	10

Estimated cost of Production of One Acre of Potatoes in Forfarshire, 1919.

	£	s.	d.
Rent, &c.			
Rent and taxes	1	17	6
Repairing Land.			
Ploughing land	1	17	6
Grubbing and harrowing—twice	0	10	6
Drilling	0	10	0
Farmyard manure—			
16 tons at 10s. £8 0 0			
Carting at 3s. 2 8 0			
£10 8 0			
Allow 25 per cent. 2 12 0			
	7	16	0

Estimated cost of Production of One Acre of Potatoes in Forfarshire, 1919—continued.

				£	s.	d.
Manure.						
Chemical manure (Potato, 6 per cent.)—						
8 cwts. at 11s. 6d.	£4	12	0			
Allow 25 per cent.	1	3	0			
				3	9	0
Spreading farmyard manure	£0	7	6			
,, chemical ,,	0	1	6			
				0	9	0
Seed.						
Seed, 22 cwts., at £8, including cartage				8	16	0
Planting.						
Planting				0	7	6
Working and Cleaning.						
Covering drills				0	10	0
Circular harrowing—twice				0	7	6
Hoeing				0	10	0
Grubbing between drills—twice, first with one horse, then with two horses				0	16	0
Furrowing up—twice				0	16	0
Digging.						
Digging and carting to pits—4 pairs horses and men at 40s., £8 for 3 acres—for 1 acre—				2	13	4
Gathering and harrowing				2	10	2
Pitting.						
Straw for pits, 25s., pit men 13s.				1	18	0
Covering pits				0	6	8
Sundries.						
Hampers and wear and tear of implements				1	0	0
Dressing and Carting.						
*Dressing potatoes out of pits, say 5 tons at 6s. = 30s : carting to station 5 tons at 5s. = 25s.				2	15	0
Broken Time.						
Lost time—Broken weather, &c.				1	15	0
Interest.						
Interest				2	0	0
				£43	10	6

* These items will vary according to the weight of the crop.

APPENDIX IV.

Handed in by Mr. James Wyllie, B.Sc., &c., representing the National Farmers' Union (England) as part of his evidence-in-chief, September 23rd and 24th, 1919.

PART A.

Instructions circulated to members of the National Farmers' Union setting out principles to be followed in the preparation of statements of cost of production.

SCH. B.

DISTRIBUTION OF RENT AND RATES.

Farm Rent } Total to be distributed as shown below.
Local Rates }

Allowance for annual value of farm dwelling-house according to local rates Assessment.

Allowance for annual value of workers' cottages included in the farm let £4 to £7 each.

Allowance for annual value of farm buildings according to local rates Assessment.

Remainder to be charged against land and distributed over arable and pasture according to relative value.

Differential rates may be charged against arable as well as against pasture land.

NOTE.—This distribution of rent and rates should be made in every case where costs are submitted.

SCH. C.

STATEMENT OF THE COST OF HORSE LABOUR

1. Foods, per horse per annum.
   Average cost per week, with details, during summer period.
   Average cost per week, with details, during winter period.
   Give average weekly ration per horse at various periods.
   Charge foods on basis laid down in Sch. G.
2. Other Costs, per horse per annum.
   1. Shoes and Shoeing. New shoes, removes, frost studs, or sharps.
   State pre-war and present price of set of shoes.
   2. Harness. Ordinary plough and cart harness, plough lines, halters.
   Allow for repairs and depreciation or replacements. Harness oil and paste.
   State pre-war and present price of complete set of harness.
   3. Stable equipment. Brushes, combs, graips, shovels, corn-bin, lamps and oil.
   4. Stable rent, rates and repairs. *See* Sch. B.
   5. Veterinary attendance and medicines, colic drinks, linseed oil, condiments, &c.
   6. Depreciation. Show clearly how arrived at. State if deaths include it.
   7. General expenses. Proportion fire insurance, and other general farm charges including supervision.
   8. Interest on Capital. 5% per annum on average value of horses, harness and other equipment.

NOTE.—In most cases the cost of litter may be set against value of manure.

Number of working days, per horse per ann. Allow for Sundays, Saturday short days, holidays, sickness of man or horse, sore shoulders, wet days, snow, frost, times when not work for all horses or when only one of team may be required, threshing, visits to smithy, unremunerative work, *e.g.*, road mending, clearing up yards, &c.

State number of horses upon which statements based.

Horseman. Actual cost (cash wages plus allowances) per week at various times during summer and winter periods.
Number of working hours per week at various times.

NOTE.—This estimate is desired wherever estimates of the cost of production of crops are to be submitted.

SCH. D.

STATEMENT OF THE COST PER ACRE OF GROWING WHEAT, OATS OR BARLEY.

Rent. *See* Sch. B.
Local rates. *See* Sch. B.
Manures. Kinds, quantities, prices, proportions charged.
Seed. Quantity, price.
Cultivations. Give details of cost of all tillages done before and after sowing, number of acres done per day and number of horses employed on each operation.
Harvesting. Give details of all work done, as for cultivations. Twine, thatching materials, harvest money.
Threshing. Give details of all work done, as for cultivations. Coals, twine, thatching straw.
Marketing. Give details of all work done, as for cultivation. Distance to station.
Use of implements and machinery: repairs, replacements or depreciation, oil, interest.
General expenses. Ditching, fencing and general charges, *i.e.* proportion of fire insurance, workmen's compensation, clerical and marketing expenses, driving pony and trap or motor car, bad debts, subscriptions to farmers' societies, unremunerative man work and petty expenses.
Proportion of cost of liming. State quantity, kind, cost and when applied
Proportion of cost of cleaning and manuring, carried forward.
Interest on average outlay at 5% per annum.
Management.

Broken time. This may be allowed for in estimating the quantity of work done per day, or put in as a separate item.

Yield per acre, grain and straw. State :—
Number of acres on which above estimate is based.
Nature and condition of the soil.
Remarks on season and influence on cost of cultivation, yield, &c.
Crops grown during previous three years.

NOTE.—The credit to a corn crop for straw should be made on the same basis as the charge made for straw against live stock and manure.

SCH. E.

STATEMENT OF THE COST PER ACRE OF GROWING MANGOLDS OR SWEDES.

Rent. *See* Sch. B.
Local rates. *See* Sch. B.
Farmyard manure. Quantity, price, proportion charged.
Artificial manures. Quantity, price, proportion charged.
Proportion of cost of liming (if any) give details of kind, quantity, cost and when applied.
Seed. Quantity, cost.
Cultivations. Give details of all tillages done before and after singling: number of acres done per day and number of horses employed on each operation.
Singling and hand hoeing. Cost and time taken.
Lifting. Topping, tailing, carting, and pitting or carting to where consumed. Give details of operations and time taken.
Use of implements. Allowance for repairs, replacements or depreciation, oil, interest.
General Expenses. Proportion of cost of ditching, hedge cutting, &c., and general charges. *See* Sch. D.
Interest of average outlay at 5 % per annum.
Management.
Broken time. *See* Sch D.
Deduct proportion of cleaning costs.

Sch E —*continued.*

Yield per acre, State :—
Number of acres on which above estimate is based.
Nature and condition of soil.
Remarks on season and influence on cost of cultivations, yield, &c.
Crops grown during previous three years.

NOTE.—A similar schedule will serve for setting out the cost of production per acre of potatoes.

SCH. F.

STATEMENT OF THE COST OF PRODUCTION PER ACRE OF CLOVER OR OTHER HAY.

State :—
Kind of Hay.
Number of years to be under hay or grass.
Year in which seeds sown.
Cropping for three years previous.
How was root crop (if any) disposed of.
Outline of manuring in previous years.
Rent. *See* Sch. B.
Local rates. *See* Sch. B.
Cost of Grass and Clover seeds } State
" " Sowing, harrowing and rolling same } proportion charged.
" " Manures applied to hay (Give quantities, kinds and prices) } do.
" " Sowing same
" " Rolling, harrowing, &c.
" " Lime applied to hay (Quantity, kind and price). do.
" " Cutting and harvesting, including stacking. (Give details of operations and time taken.)
" " Thatching.
" " Marketing. (Give details of work done.)
Use of Machinery and Implements. Repairs, depreciation or replacements, oil, interest.
State proportion of general expenses. *See* Sch. D.
" " cost of manuring and liming carried forward.
" " " cleaning carried forward.
Interest on average outlay—5% per ann.
Management.
Broken time. *See.* Sch. D.

State :—
Yield per acre.
Nature and condition of soil.
Number of acres on which above estimate is based.
Remarks on season, and influence on yield, cost of harvesting, quality of crop, &c.

SCH. G.

BASIS ON WHICH FOODS TO BE CHARGED AGAINST LIVE STOCK.

Purchased foods of whatever kind charged at net purchase price plus cost of delivery to farm.

Home grown foods. Straw, Roots, Green Forage crops } at estimated cost of production.
Hay, Oats, Beans } at market price less cost of marketing.

Grazing as under :
Rent of land and local rates.
Share of cost of laying down to grass } in case of
" " " " manures previously applied } rotation pasture.
" " " " " applied for 1918.
State kind, quantity, price proportion charged.
Share of cost of lime applied.
State kind, quantity, price, when applied.
Cutting thistles and other weeds } give details of
Harrowing and rolling } time taken.

General Expenses. Hedging, ditching, &c. *See* Sch. D.

Deduction for Manure. Credit farmyard manure according to the custom prevailing in the district. Where necessary, use Hall and Voelcker's table of Manurial values or other scale used in the district.

NOTE.—The Charge for manure against crops should be made on exactly the same basis as the credit for manure to live stock.

SCH. H.

COST OF PRODUCTION OF BEEF PER CWT.

Four Typical cases :—
(1) Stores bought in spring to be fattened during grazing season.
(2) Stores bought in autumn to be fattened during house feeding season.
(3) Stores bought in autumn to be finished in following grazing season.
(4) Stores bought in spring to be finished in following winter.
Number and kind of stores and date of purchase.
Average purchase price per head, and, if known, per live cwt.
Foods. Give full details of feeding—kinds, quantities, &c.—at various periods. Charged according to prices laid down in Sch. G.
Labour. Give full details of how cost arrived at.
Rent and rates on buildings, proportion of. *See* Sch. B.
Insurance on buildings and live stock ; proportion of.
Marketing expenses. Show how arrived at.
General expenses. Proportion of. *See* Sch. D.
Interest on Capital. At rate of 5% per annum on average outlay.
Management. Allowance for.
Cost of Litter, unless included under foods.
Manurial value, state how arrived at.
Date of Sale. Average live weight and, if possible, dead weight when sold.
General remarks. Supply of feeding stuffs, quality. &c.
Class of pasture, soil, weather and its effects on grazing.
Any other relevant observations.

NOTE.—Similar information required upon the cost of production of mutton per lb.

SCH. I.

COST OF PRODUCTION OF MILK.

1. *During Summer* (*May to September inclusive*).

Average number of cows (includes heifers) in herd during period.
Average number of cows milk during period.
Average value per head.

1. Foods. Give details of feeding given at various periods. Acreage of grass, kinds and quantities of purchased foods, forage crops, &c.
For basis for charging foods. *See* Sch. G
No deduction for manurial values to be made at this stage.
2. Labour. Give full details of workers employed, wages (inclusive), &c. Allowance to be made for any work done outside dairy.
3. Depreciation. To valuation of cows at beginning of period add cost of cows purchased or value of heifers brought into herd.
To valuation of cows at end of period add price received for cows sold during the period.
Difference between these two sums gives depreciation or appreciation.
In the valuation, fluctuations in market prices of cows to be disregarded.
4. General expenses, viz. :—
Share of rent, rates and repairs on buildings.
Coal (for washing water, &c.) and oil (for lighting, &c.).
Veterinary expenses and medicines.
Depreciation and upkeep of dairy, machinery and utensils.
Share of general farm expenses. *See* Sch. D
Keep of Bull (in some cases only).
5. Delivery. Show how cost arrived at.
6. Interest on Capital. Invested in cows and dairying equipment at 5% per annum.
7. Management. Allowance for.

Deduct. Manurial value—show how arrived at.
Value of calves born during period.

State total quantity of milk produced during period including milk sold, used for calves, given as perquisite and used in farm houses. It is desired that the milk sales book should be available if asked for.
Remarks. Quality and supply of feeding stuffs, nature of season, effects on milk production. Any other relevant observations.

NOTE.—Similar information required in order to estimate the cost of production of milk during the house feeding season (October to April inclusive.)

PART B.

Summaries of Costs of Production of Cereals, Potatoes, Mangolds, Roots, Hay, Beef, Mutton, Sheep and Milk.

A.—WHEAT.

(1) 1918 CROPS.

Farm No.	County.	Wheat No.	Soil.	Cost per acre.	Yield. Grain.	Yield. Straw.	Cost per qr. (504 lb.)	Average yield. Grain.	Average yield. Straw.	Remarks.
				£ s. d.	Bush.	Cwt.	s. d.	Bush.	Cwt.	
1	Oxford ...	1	Light ...	11 1 5	—	—	65 6	25¾	—	Credit straw @ 10s. per cwt.
1	„ ...	—	„	11 4 9	—	—	—	25¾	—	„ „ „ „
7	Essex ...	6	Medium ...	15 16 2	—	—	62 9	38	34	
11	Lancs. ...	9	„	16 2 7	—	—	—	—	—	Crop badly weathered. Loss—£39 5s. 4d. off 4 acres.
15	Lancs. ..	11	Good loam	23 3 6	41	32	71 10	36	28	Straw credited at £3 per ton.
17	Cheshire	12	Strong loam	21 14 4	40	28	76 1	—	—	„ „ „ „
20	Essex ...	14	Clay ...	14 4 5	—	—	89 10	24	15	
23	Leicester	15	Light ...	13 15 3	—	—	68 10	32	—	Straw against manure.
26	Essex ...	16	Heavy clay	19 14 6	24	20	124 10	24	20	Exceptional case.
28	Hants ...	17	Heavy ...	16 3 0						
28	„ ...	17	Medium ...	13 11 6	25	18	83 4	28	25	
28	„ ...	17	Light ...	12 3 0						
29	Essex ...	18	Clay ...	14 0 0	24	20	86 8	24	20	
30	Dorset ...	19	Light ...	14 5 4	34	—	67 4	28	—	Straw against manure.
37	Gloucester	20	Medium ...	10 19 8	25	20	63 10	25	20	
43	Essex ...	24	Clay ...	15 4 9	32	25	69 11	32	25	After bare fallow.
43	„ ...	25	„	13 14 6	32	25	62 4	32	25	
45	E. Yorks	27	Heavy ...	19 6 9	32½	50	83 4	—	—	
48	Norfolk ...	30	Medium ...	15 1 5	—	—	69 1	32	25	
60	Somerset	35	Clay ...	17 10 2	—	—	80 6	32	28	
63	Salop ...	37	Medium ...	19 5 4	41	30	69 4	30	25	
68	Lancs. ...	41	„	13 6 5	—	—	68 8	28	25	Crop badly weathered at harvest.
79	Cheshire...	42	„	16 6 3	32	30	74 1	—	—	
89	Warwick	44	Heavy ...	17 3 8	24	18	108 5	32	—	

NOTE.—In arriving at the cost per quarter in this and in the following tables, the general rule has been to credit the crop with straw at £1 per ton. Where the yield for the year in question is given the cost per qr. is calculated on that yield ; otherwise it is based upon the average yield.

(2) 1919 CROPS.

Farm No.	County.	Wheat No.	Soil.	Cost per acre.	Yield. Grain.	Yield. Straw.	Cost per qr. (504 lb.)	Average yield. Grain.	Average yield. Straw.	Remarks.
				£ s. d.	Bush.	Cwt.	s. d.	Bush.	Cwt.	
1	Oxford ...	—	Light ...	13 3 6	—	—	78 8	25¾	—	Straw @ 10s. per acre.
2	Gloucester	2	„	14 11 6	30	16	73 4	33	20	
3	Worcester	3	Medium ...	16 13 10	32	20	75 11	34	25	Straw at 30s. per ton.
5	Leicester	4	Clay ...	15 19 10	—	—	71 2	36	—	Straw against manure. No charge for interest or management.
5	„ ...	5	„	14 12 10	—	—	73 2	32	—	„ „ „
8	Oxford ...	7	Light ...	10 14 3	16	9	71 5	24	14	Straw against manure. Average crop costs.
9	E. Yorks...	8	Wold ...	16 9 0	—	—	77 3	32	20	Straw £1 per acre.
12	Oxford ...	10	Medium ...	13 7 11	24	15	83 3	—	—	1918 crop : 32 bushels & 30 cwts.
18	Gloucester	13	Stonebrash	13 0 0	—	—	94 8	20¼	—	Straw @ £1 per acre
40	Dorset ...	21	Heavy clay	17 7 8	—	—	71 10	36	25	
41	Gloucester	22	„	16 8 6		—	69 8	35	28	
42	Berks ...	23	Sandy ..	15 15 3	32	20	73 10	32	23	After bare fallow.
44	Kent ...	26	Medium ...	17 16 10	32	15	85 5	36	20	
46	„ ...	28	Heavy ...	18 15 11	25	18	114 8	27	22	
47	„ ...	29	Medium ...	19 11 1	36	30	80 3	36	30	
49	Gloucester	31	Moorish ...	13 16 3	23	21	88 8	20	19	
51	Hereford	32	Loam ...	16 8 3	28	16	89 4	28	16	
56	Essex ...	33	Medium ...	16 19 11	—	—	78 9	32	25	
58	Cambs. ...	34	Light ...	13 19 4	24	15	88 1	38	16	
61	Hants ...	36	Brickearth	12 14 10	29	16	66 0	32	18	
64	Lincoln ...	38	Medium ...	13 19 6	—	—	78 0	27	20	Average 1916–18.
65	Sussex ...	39	Brickearth	18 10 1	40	25	69 0	40	25	
67	„ ...	40	Clay ...	19 18 9	—	—	75 9	40	—	Straw @ £1 per acre.
81	Cheshire...	43	—	16 18 10	—	—	102 11	24	30	

B.—BARLEY.

(1) 1918 Crops.

Farm No.	County.	Barley No.	Soil.	Cost per acre.	Yield. Grain.	Yield. Straw.	Cost per qr. (448lbs.)	Average yield. Grain.	Average yield. Straw.	Remarks.
				£ s. d.	Bush.	Cwts.	s. d.	Bush.	Cwts.	
23	Leics. ...	9	Light ...	14 4 0	—	—	71 0	32	—	Straw against manure.
27	Norfolk ...	10	Medium ...	15 8 2	42	22	54 8	—	—	
30	Dorset ...	11	Light ...	13 11 6	36	—	60 4	28	—	" " "
50	Somerset	14	Sandy ...	15 4 3	—	—	64 2	36	15	
57	Norfolk ...	16	Light ...	12 19 10	—	—	81 7	24	15	
63	Salop ...	18	Loam ...	14 15 2	40	16	55 10	—	—	

(2) 1919 Crops.

Farm No.	County.	Barley No.	Soil.	Cost per acre.	Yield, Grain.	Yield, Straw.	Cost per qr. (448lbs.)	Average yield. Grain.	Average yield. Straw.	Remarks.
				£ s. d.	Bush.	Cwts.	s. d.	Bush.	Cwts	
1	Oxford ...	2	Light ...	13 1 3	28	—	71 10	28½	—	Straw @ 10/- per acre.
1	" ...	3	" ...	13 12 10	24	—	87 7	28½	—	" " "
2	Glouces. ...	4	" ...	15 3 0	30	13	77 4	32	15	
8	Oxford ...	5	" ...	14 2 6	16	6	80 8	28	10	Straw against manure. Average crop costs.
9	E. Yorks.	6	Wold ...	14 19 7	—	—	71 2	32	15	Straw @ £1 per acre.
18	Glouces. ...	7	Stonebrash	11 11 9	—	—	70 7	24	—	" " "
40	Dorset ...	12	Medium ...	14 2 11	—	—	57 6	37	16	
42	Berks. ...	13	Sandy ...	16 5 6	32	14	77 10	35	18	
54	Lincoln ...	15	Wold ...	13 16 9	—	—	65 5	32	15	
58	Cambs. ...	17	Light ...	16 5 4	24	10	105 1	29	12	Cost includes £7 after sheep on roots.
64	Lincoln ...	19	Medium ...	13 17 10	—	—	67 9	31	15	Average 1916-18.

C.—OATS.

(1) 1918 Crops.

Farm No.	County.	Oats No.	Soil.	Cost per acre.	Yield. Grain.	Yield. Straw.	Cost per qr. (336lbs.)	Average yield. Grain	Average yield. Straw.	Remarks.
				£ s. d.	Bush.	Cwts.	£ d.	Bush.	Cwts.	
11	Lancs. ...	6	Medium ...	13 6 9	—	—	—	—	—	Badly weathered. Loss £96 11s. 1d. off 17 acres.
15	" ...	7	Good Loam	22 3 3	68	32½	38 10	56	27	Straw @ 70/- per ton.
17	Cheshire...	8	Strong "	19 10 10	64	30	35 8	—	—	" " "
20	Essex ...	10	Clay ...	14 13 9	—	—	50 5	44	20	
45	E. Yorks.	11	Heavy ...	14 11 0	57½	36	35 6	—	—	
55	Cheshire...	12	—	14 0 0	40¾	24	- -	—	—	War crop.
57	Norfolk ...	13	Light ...	13 0 4	—	—	47 3	40	24	

(2) 1919 Crops.

Farm No.	County.	Oats No	Soil.	Cost per acre.	Yie Grain.	Yie Straw.	Cost per qr. (336lbs.)	Average yield. Grain.	Average yield. Straw.	Remarks.
				£ s. d.	Bush.	Cwts.	s. d.	Bush.	Cwts.	
3	Worcester	2	Medium ...	16 7 10	32	20	71 11	42	30	Straw @ £2 per ton.
5	Leicester	3	Clay ...	13 3 2	—	—	52 8	40	—	Straw against manure. Exclusive of interest and Management.
8	Oxford ...	4	Light ...	10 18 6	24	7	54 7	32	12	Straw against manure. Average crop costs.
9	E. Yorks	5	Wold ...	16 1 4	—	—	75 1	40	20	Straw £1 per acre.
18	Gloucester	9	Stonebrash	13 8 0	—	—	58 0	33½	—	" " "
61	Hants. ...	14	Brickearth	13 0 9	52	25	36 3	40	21	
62	Lancs. ...	15	Stoneloam	17 9 7	35	18	67 9	46	23	Straw @ 60/ per ton.

D.—POTATOES.

(1) 1918 Crops.

Farm No.	County.	Potatoes No.	Soil.	Cost per acre.	Yield of ware & seed.	Cost per ton.	Av. yield of ware & seed.	Remarks.
				£ s. d.	tons. cwt.	£ s. d.	tons. cwt.	
6	Berks. ...	2	Light ...	40 3 3	—	6 10 6	6 0	
7	Essex ...	3	Medium ...	39 19 2	—	5 11 4	7 0	
15	Lancs. ...	4	Good loam ...	49 3 6	6 17	7 0 8	7 10	
17	Cheshire...	5	Black land...	51 9 7	8 0	6 6 1	—	
19	Berks. ...	6	Loam ...	46 6 1	7 0	6 9 5	5 0	1919 crop "very poor."
34	Warwick ..	7	Light ...	36 3 4	6 10	5 8 2	—	
38	Kent ...	9	Loam ...	47 0 7	6 10	7 1 7	—	
39	„ ...	10	Light ...	58 14 10	7 0	8 5 0	—	
52	Cheshire...	11	Medium ...	29 1 0	—	4 9 5	6 10	
63	Salop ...	16	Loam ...	43 4 8	8 0	5 5 7	—	
70	Kent ...	18	Medium ...	53 12 11	8 0	6 11 7	—	
71	„ ...	19	Loam ...	53 3 5	6 0	8 13 11	—	

(2) 1919 Crops.

Farm No.	County.	Potatoes No.	Soil.	Cost per acre.	Yield of ware & seed.	Cost per ton.	Av. yield of ware & seed.	Remarks.
				£ s. d.	tons. cwt.	£ s. d.	tons. cwt.	
3	Worcester	1	Medium ...	37 8 9	6 0	6 1 5	7 0	
35	E. Yorks...	8	Warp ...	53 19 1	6 0	8 16 6	—	7 tons 1918.
53	Salop ...	12	Medium ...	40 7 0	6 0	6 11 2	7 0	
56	Essex ...	13	„ ...	46 5 3	—	7 10 10	6 0	
61	Hants. ...	14	Brick earth ..	29 15 9	4 0	7 3 11	5 0	
62	Lancs. ...	15	Strong loam	51 18 9	6 5	8 3 0	9 0	
64	Lincoln ...	17	Medium ...	45 16 2	5 5	8 10 8	6 10	

NOTE.—In calculating the cost per ton, a credit of £1 per acre has been made for "brock" potatoes.

E.—MANGOLDS.

Farm No.	Year.	County.	Mangolds No.	Soil.	Cost per acre.	Yield.	Cost per Ton.	Ave'ge Yield.	Remarks.
					£ s. d.	Tons.	£ s. d.	Tons.	
13	1918	Berks. ...	1	Stonebrash..	19 18 0	13	1 10 9	17	
24	„	Berks. ...	2	Gravel ...	31 1 10	22	1 0 0	—	Charged to cows @ £1 per ton. £9 1s. 10d. forward.
33	„	Dorset ...	3	Light ...	22 15 2	25	0 18 1	20	
48	„	Norfolk ...	6	Medium ...	23 9 2	—	1 3 6	20	
50	„	Somerset ...	8	Sandy ...	29 5 6	—	1 0 0	30	
60	„	„ ...	9	Clay ..	22 8 0	—	1 2 4	20	
40	1919	Dorset ...	4	Heavy clay...	27 13 7	—	0 18 6	30	
42	„	Berks. ...	5	Sandy .	24 0 0	24	1 0 0	—	
49	„	Gloucester ...	7	Moorish ...	13 12 6	—	—	—	Fed off by sheep.
61	„	Hants. ...	10	Brick earth ..	29 17 1	23	1 6 0	20	
67	„	Sussex ...	11	Clay... ...	18 15 11	20	0 18 9	30	

F.—ROOTS.

Farm No.	Year.	County.	Roots No.	Soil.	Cost per acre.	Yield.	Cost per Ton.	Ave'ge Yield.	Remarks.
					£ s. d.	Tons.	£ s. d.	Tons.	
23	1918	Leicester ...	8	Medium ...	12 1 0	—	—	—	Fed off.
52	„	Cheshire ...	9	„ ...	22 13 6	30	0 15 1	—	
3	1919	Worcester ...	2	Medium ...	19 8 10	15	1 6 0	—	Carted off.
3	„	„ ...	3	„ ...	9 12 5	9½	1 0 0	—	For Sheep.
8	„	Oxford ...	4	Light ...	11 18 0	—	—	—	„
9	„	E. York ...	5	Wold ...	13 12 2	—	—	12	„ and cattle.
12	„	Oxford ...	6	Light ...	13 17 2	—	—	—	„
								Loads	
18	„	Gloucester ...	7	Stonebrash...	12 7 3	—	—	14	„
54	„	Lincoln ...	10	Wold ...	7 18 10	—	—	—	„
58	„	Cambs. ...	11	Light ...	14 1 6	—	—	—	„
								Tons	
64	„	Lincoln ...	—	Medium ...	18 16 0	—	1 17 6	10	Carted off.
64	„	„ ...	—	„ ...	11 16 4	—	1 3 7	10	Sheep folded.

G.—SEEDS OR CLOVER HAY.

Farm No.	Year.	County.	Hay No.	Soil.	Cost per acre. £ s. d.	Yield. Cwts.	Cost per ton. £ s. d.	Average yield. Cwts.	Remarks.
13	1918	Berks ...	5	Stonebrash...	6 13 10	23	5 15 0	—	
15	,,	Lancs. ...	6	Good loam ...	13 6 6	45	6 0 0	50	Two cuts.
17	,,	Cheshire ...	7	Black land...	17 8 6	35	9 19 0	—	,,
23	,,	Leicester ...	9	Light ...	7 8 0	—	—	—	
30	,,	Dorset ...	10	,, ...	6 10 3	22	6 0 0	25	
60	,,	Somerset ...	12	Clay ...	9 19 1	25	8 0 0	20	
66	,,	Cheshire ...	15	Heavy loam	8 18 9	30	6 0 0	—	15*s.* allowed for eddish.
3	1919	Worcester...	1	Medium ...	13 2 1	30	8 14 0	—	Two cuts.
5	,,	Leicester ...	2	Heavy ...	7 12 10	—	6 2 0	25	Excl. interest and management.
8	,,	Oxford ...	3	Light ...	8 11 3	12	14 5 0	25	
18	,,	Gloucester	8	Stonebrash...	7 6 6	—	9 0 0	15	Aftermath grazed @ 10*s.* p.a.
58	,,	Cambs. ...	11	Light ...	10 10 0	—	10 10 0	20	
62	,,	Lancs. ...	13	Strong loam	18 4 5	36	10 0 0	40	Two cuts.
64	,,	Lincoln ...	14	Medium ...	8 5 10	25	5 10 0	—	Plus £1 eddish.

H.—BEEF.

Farm No.	County.	Beef No.	Period.	No. of Cattle.	Net cost per live cwt. s. d.	Dung valued at per ton. s.	Remarks.
3	Worcester...	1	Winter 1919—20	12	97 6	10	
9	E. Yorks. ...	2	,,	20	107 9	—	Straw charged @ £1 per acre. £199 for M.V.
12	Oxford ...	3	1919	8	88 4	—	Sold July, 1919. Litter against manure.
18	Gloucester	4	Winter 1919—20	—	91 0	—	Dung @ 36*s.* each.
31	Lincoln ...	5	,, 1918—19	26	—	—	Manure cost 26*s.* per ton.
32	,, ...	6	,, ,,	26	—	—	,, ,, 78*s.* ,,
35	Berks. ...	7	1919 ,,	10	83 9	—	Sold June, 1919. Straw against manure.
36	,, ...	8	,,	10	82 4	—	Sold August, 1919. Straw against manure.
59	Cambs. ...	9	Winter 1918—19	22	—	—	Deficit £76 5*s.* 8*d.* Straw against manure.
63	Salop ...	10	1918	8	76 3	—	
68	,, ...	,,	1918—19	12	89 8	10	
69	Berks. ...	11	Nov. 1918—May 1919	15	124 6	10	No roots used.

I.—MUTTON.

Farm No.	County.	Mutton No.	Period.	No. of Sheep.	Net Cost per lb. d.w. s. d.	Remarks.
3	Worcester...	1	Winter 1919—20	—	1 7	Excl. interest and management.
8	Oxford ...	2	,, 1918—19	60	—	Profit of 32*s.*
9	E. Yorks. ...	3	Winter 1919—20	160	1 7	
15	Gloucester..	4	,, ,,	180	1 7	
54	Lincoln ...	5	,, ,,	63	1 3½	£41 10*s.* 1*d.* allowed for M.V. of cake and corn.
74	Sussex ...	6	,, 1918—19	245	1 3½	£205 16*s.* 0*d.* charged to crops.

J.—SHEEP.

Sheep Accounts for year ending Michaelmas, 1919.

Farm No.	County.	Sheep No.	Deficit. £ s. d.	Manurial Value Credited. £ s. d.	Basis on which roots etc. charged.	Remarks.
4	Wilts. ...	2	897 10 5	150 0 0	Turnips @ £3, Swedes @ £3 10*s.* per acre.	Excl. Interest, management, and general charges.
10	Hants. ...	3	2,270 1 6½	178 19 2	Roots @ half cost of production.	
50	Dorset ...	4	786 2 0	200 0 0	Roots @ £4 per acre.	
72	Hants. ...	5	1,687 0 0	223 13 3	Roots & catch crops @ 110*s.* per acre	A very poor crop of lambs.
75	Dorset ...	7	1,531 2 3	404 0 0	Roots @ £4 per acre.	
76	,,	8	1,156 7 6	226 5 4	,, ,,	

K.—MILK.

Cost of Milk Production for Year Ending 30th April, 1919.

Farm No.	County.	Milk No.	Period. May 1, '18—Sept. 30, '18. Net Cost per gal.	Period. May 1, '18—Sept. 30, '18. M.V. per gal.	Period. Oct. 1, '18—April 30, '19. Net Cost per gal.	Period. Oct. 1, '18—April 30, '19. M.V. per gal.	Remarks.
			d.	*d.*	*d.*	*d.*	
6	Berks ...	1	16·87	—	37·0	2·34	
7	Essex ...	2	15·5	—	29·35	2·5	29·35d. Oct. to Jan., 30·13d. Feb. to April. M.V.—2·5d.
13	Berks. ...	3	14·43	0·3	26·93	0·88	
24	Berks. ...	4	12·5	—	25·5	1·00	
25	Cheshire ...	5	12·5	—	25·0	1·00	
29	Essex ...	6	16·5	—	35·25	2·5	
30	Dorset ...	7	12·75	—	24·5	1·5	
77	Essex ...	8	24·0	—	24·5	1·0	
78	Cheshire ...	9	17·0	—	30·0	3·0	
79	Cheshire ...	10	18·5	—	28·3	1·75	
80	Berks. ...	11	10·75	—	24·75	2·00	
81	Cheshire ...	12	17·25	—	30·5	2·00	
82	Leicester ...	13	23·5	—	—	—	From 1st October, 1917 to 9th August, 1919.
83	Cheshire ...	14	15·3	—	23·25	—	Manure against interest and establishment charges.
84	Sussex ...	15	22·0	2·0	—	—	
85	Dorset ...	16	14·0	—	30·5	2·5	
86	Dorset ...	17	15·33	—	25	2·0	Oct. to Jan. 25d.; Feb. to April, 29·5d.
87	Gloucester ...	18	10·02	—	19·5	1·5	Do. 19·5d.; do. 28d.
88	Lancs. ...	19	20·86	—	—	—	For year 1918.
89	Staffs. ...	20	18·5	—	39·0	3·5	

PART C.

Detailed Statements of Costs of Production of Farm Products.

FARM No. 1.

County, OXFORD.

Size of Farm: 300 acres Arable. 70 acres Pasture.

Nature of Soil: Medium, Typical Barley Soil.

System of Farming: Corn growing &c., little meat production.

NOTE.—In this case, systematic field and cost a/cs. have been kept for the last 14 years upon a system devised and perfected by the farmer himself. The system does not accord in every respect with conventional methods of farm costing, but it was intended for the personal information and guidance of the farmer and from this point of view it appears to be almost beyond criticism. The farm is devoted mainly to corn-growing and the other departments are made more or less subservient to "Corn-Crops." Thus, the corn-crops are credited with straw at a nominal rate of 10s. per acre. The total credit for straw is carried to a straw account which is credited with the price received for straw sold and the balance, if any, at the end of the year, is distributed as accurately as possible over live stock. The result is that in some years the live stock are charged nothing for straw and in any case the charge made is low. No charge has been made for interest on capital, for management or for the work done by two sons (since 1914 and 1918 respectively) as the farmer was concerned in the first place with ascertaining the total "family income" from the farm. At the same time, he is emphatic in the view that where costs are to be used as a basis for fixing fair prices to the producer, each of these three items must be included.

The accounts given below have been extracted verbatim from the farm books, but in putting them forward for the purpose of the present inquiry, additions have been made at certain points in order to bring them into line with the other accounts submitted.

HORSE LABOUR.

The following is a statement of the average number of days worked by each horse during the years 1918 and 1919. On this farm the horses are kept very regularly at work all the year round.

Month.	Days.	
Oct. 1917	25	
Nov.	24	
Dec.	17⅞	
Jan. 1918	21	
Feb.	19	
March	25	
April	22½	
May	23½	
June	17	Horses idle while men threshing, &c.
July	22⅛	
Aug.	22⅞	
Sept.	23⅔	
Total	262⅝	

365 days.
less 52 Sundays.

313
263 worked.

50 days idle through bad weather and when horsemen engaged on occasional threshing operations, &c.

Month.	Days.	
Oct. 1918	21½	
Nov.	24	
Dec.	23	
Jan. 1919	21¼	
Feb.	9½	
March	18	
April	22½	
May	23	
June	18½	Horses idle several days while men engaged threshing and 2 horses laid up.
July	13	Estimated as last year.
Aug.	22	" " "
Sept.	23	
Total	239¼	

365 days.
less 52 Sundays.

313
240 worked.

73 idle days (each horse).

WHEAT No. 1.

COST OF GROWING 100 ACRES WHEAT IN 1918.

	£ s. d.	£ s.
8 Acres Fallow.		
Fallowing all summer and growing crop mustard on part	39 11 1	
Drag, drill and harrow	10 5 3	
Seed: 4 qrs. 73s. 6d., thick seeding, dragged in late	14 14 0	
Dung on part £6, Labour to it £3 4s. 1d.	9 4 1	
Artificial manure on part	4 13 0	
Rent and rates	10 0 0	
Harvesting	7 12 0	
Thresh and deliver	7 12 3	
General a/c.	6 18 8	
		110 10
16 Acres after Stubble.		
Plough, cultivate and plant	23 15 10	
Artficial Manure	21 1 0	
Seed 4½ qrs. @ 73s. 6d.	17 18 4	
Rent and rates	20 0 0	
Harvesting	15 4 0	
Thresh and market	11 19 6	
General a/c.	13 17 1	
		123 16
30 Acres after Sainfoin.		
Plough	30 5 6	
Cultivate and plant	14 3 5	
Seed 9½ qrs. @ 73s. 6d.	34 18 3	
Artificial manure	26 13 0	
Rent and rates	37 10 0	
Harvesting	28 10 0	
Thresh and market	33 10 5	
General a/c.	26 0 0	
		231 10
14 Acres after Fallows.		
124 loads dung on part	24 0 0	
Dung carting and spreading	14 15 9	
Work on Fallows	23 8 5	
Cultivate and plant	21 9 2	
Seed	22 1 0	
Rent and rates	17 10 0	
Harvesting	13 6 0	
Thresh and market	15 3 4	
General a/c.	12 2 8	
		163 16
24 Acres after Stubble.		
Dung and labour to it on part	12 9 9	
Plough, cultivate and plant	31 8 4	
Seed 9¾ qrs.	40 19 0	
Artificial manure...	42 18 6	
Rent and rates	30 0 0	
Harvesting	22 16 0	
Thresh and deliver	16 13 10	
General a/c.	20 16 0	
		221 0
8 Acres after Roots.		
Part residue root crop	12 18 5	
Plough and plant	11 9 10	
Seed 3¾ qrs.	13 15 7	
Artificial manure...	14 16 6	
Rent and rates	10 0 0	
Harvesting	7 12 0	
Thresh and market	7 2 6	
General a/c.	6 18 8	
		84 13
Total		£935 7
Add Interest @ 5%		46 15
Management and Sons' work		125 0
Total Cost		£1107 2
Average cost per acre		£11 1

Average yield over 16 years 25¾ bush. Straw credited @ 10s. per

ESTIMATE OF COST OF ABOVE FOR 1919 CROP.

	£ s.
Cost of 1918 crop as above	935 7
Cost of manual labour was £348. At 1919 wages, there would be an increase of	132 0
Cost of horse labour was £170, *Add* 20%	34 0
To other costs, *Add*	25 0
	£1126 7
Add Interest at 5% per annum ...	56 6
Management and Sons' work	135 0
Total Cost	£1317 13
Average cost per acre ...	£13 3

Average yield 25¾ bush. Straw to be credited @ 10s. per acre

NOTE.—"General a/c." includes time lost by bad weather, cleani up, hedging, ditching, fencing, insurance and all general work a petty expenses which have not been already charged to a particu account.

Farm No. 1—*continued.*

OOTS.

(6 acres Rape, 6 acres Turnips, 2 acres Swedes).

1918.	Dr. £ s. d.	Cr. £ s. d.
ape.		
ploughing, drag and cultivation	17 12 6	
Rent and Rates	7 10 0	
Seed 22*s.*, drill and roll £1 16*s.*	2 18 0	
24 cwt. superphosphate ...	7 16 0	
Horsehoe	1 16 0	
General account, 17*s.* 4*d.* acre over all arable this year ...	5 4 0	
	42 16 6	
rnips.		
Same cultivation as rape ...	21 4 6	
Hand hoeing 5*s.* per day ...	6 10 0	
24 c. super	7 16 0	
Seed, 12 lbs. 3*s.* 6*d.*	2 2 0	
Rent and rates	7 10 0	
General	5 4 0	
	50 6 6	
wedes.		
Tractor ploughing at 25*s.* ...	2 10 0	
Drag, harrow, drill at 12*s.* 6*d.*	1 5 0	
4 lbs. seed 3*s.*	12 0	
7 cwts. super	2 5 6	
Horsehoe	12 0	
Handhoe	2 0 0	
Rent and rates	2 10 0	
General	1 14 8	
	13 9 2	
½-costs rape, charged to sheep		21 8 3
" " " next crop ...		21 8 3
" turnips, charged sheep		25 3 3
" " " next crop ...		25 3 3
" swedes, charged sheep		6 14 7
" " " next crop ..		6 14 7
	£106 12 2	106 12 2

SHEEP (on foregoing Roots).

1918–19 (Winter).	Dr. £ s. d.	Cr. £ s. d.
Valuation.		
98 feeding sheep of Michaelmas, 1918...	379 10 0	
½-costs of roots as above...	53 6 1	
Cake, £45. Straw chaff, £5	50 0 0	
Labour	25 10 6	
Use of hurdles, cutter, troughs ...	5 0 0	
r. by :		
98 sold for fat, in wool		507 1 10
To balance—deficit		6 4 9
	£513 6 7	513 6 7

CROPS FOLLOWING SHEEP.

1919.	Dr. Oats. After Rape. £ s. d.	Barley. After Turnips. £ s. d.	Barley. After Swedes. £ s. d.	Cr. £ s. d.
roportion cost of roots	21 8 3	25 3 3	6 14 7	
ough	6 11 3	7 4 6		
arrow and Drill ...	1 11 6	1 12 6		
ed	7 10 0	7 7 0		
histling	1 5 6	3 9 6		
ent and rates... ...	7 10 0	7 10 0		
eneral Account ...	6 0 0	6 0 0		
arvest and thatch complete	11 8 6	11 8 6		
resh and deliver ...	5 8 0	5 8 0		
ultivs. in attempt to get land fine enough to sow corn			2 17 2	
ther cultivs. to plant roots again which have also failed ...			9 4 0	
stimated Credits.				
30 qrs. oats 50*s.*, straw 10*s.* per acre				78 0 0
5 qrs. barley 67*s.*, straw 10*s.* per acre				29 16 0
2 acres after swedes				— — —
	£68 13 0	75 3 3	18 15 9	107 16 0

SUMMARY OF BALANCES OF FOREGOING OPERATIONS.

	Dr. £ s. d.	Cr. £ s. d.
1918 Roots	— — —	— — —
1918–19 Sheep	6 4 9	
1919 { Oats		9 7 0
1919 { Barley	45 7 3	
1919 { Other 2 Acres	18 15 9	
	£70 7 9	9 7 0
Total "Losses" ...	£70 7 9	
" "Profits" ...	9 7 0	
	£61 0 9	

Final balance on these 3 years' operations is a "loss" of £61 0*s.* 9*d.*, which loss has to be carried by the land the next year or two. The barley crop is a wretched one due to land working unkindly in spring through being so wet when sheep were on it, but it would have been all right in a "dripping" season.

No charge made for interest on capital for management, or for sons' work.

1919.

COSTS OF CLEANING FOUL LAND.

The aftermath of war-farming for continuous corn growing: combined with shortness of labour and late harvests with wet autumns and this year a late wet spring.

83 acres on farm with total 300 acres arable. Most of the remainder will want similar treatment and expense as its turn comes.

	Horsework put into field. £ s. d.	Tractor work put into field. £ s. d.
30 acres :		
Plough 25 acres	26 18 9	
Plough 10½ acres 25*s.* part twice ...		13 2 6
Cultivate, 8 acres 10*s.*		4 0 0
Various scufflings and cultivations	29 14 0	
Plough 15 acres again 25*s.*... ...		18 15 0
Cultivate, 15 acres twice, 10*s.* each		15 0 0
13 acres :		
Plough headlands, drag twice and chain harrow	10 9 9	
Collect and burn squitch	3 18 0	
Plough, 12 acres 25*s.*		15 0 0
Cultivate, 3½ times 10*s.* each ...		22 15 0
14 acres :		
Plough, 14 acres @ 25*s.*		17 10 0
Plough 4 acres again		5 0 0
Drag, twice 3*s.*		4 4 0
Harrow and roll	3 13 6	
12 acres :		
Plough, 9 acres @ 25*s.*		11 5 0
Plough, 3 acres and drag, skim, harrow and roll	13 18 2	
14 acres :		
Plough, part once and part 3 times =27 @ 25*s.*		33 15 0
Cultivate, 10 acres, 3 times @ 10*s.*		15 0 0
83 acres	£88 12 2	175 6 6
Tractor work ...		175 6 6
Horse " ...		88 12 2
		263 18 8
Add Rent and Rates, 25*s.*		103 15 0
"General a/c"		83 0 0
Total cost of cleaning this 83 acres		£450 13 0
Cost per acre		£5 8 7

The above expenses clean the land, but it has still to be enriched.

Root crops planted on two or three pieces of above land (expense attached to this not included) have miserably failed owing to drought and "fly."

Horses have been charged since May 19th at 4*s.* per working day, which is really too low. This work mostly done since then.

Horsemen's wages 7*s.* 6*d.* and 7*s.*

"General" a/c in preceeding years has come out per arable acre :

TO MICHAELMAS

	s. d.
in 1918	17 4
1917	17 6
1916	27 0
1915	19 0
1914	13 1
1913	10 0
1912	9 6

This as a guide to my charge of "General a/c" in accounts.

20*s.* per acre for year ending Michaelmas, 1919, will not be a high estimate.

Farm No. 1—*continued.*

ACCOUNT OF ROOTS, SHEEP, OATS AND BARLEY CROPS.

ROOTS No. 1. (14 acres Swedes). 1917.	Dr. £ s. d.	Cr. £ s. d.
To Dung, 200 loads @ 3s. 6d.	35 0 0	
Plough, twice @ 15s. each	21 0 0	
Cart and spread dung	12 13 4	
Tractor cultivate, twice @ 7s. 6d. each	10 10 0	
Drill, roll and harrow	3 5 11	
Swede seed	2 19 6	
Superphosphate, 5 tons 12½ cwt.	37 2 10	
Hoeing 24s. acre, horse hoeing 6s. acre	21 0 0	
Rent and rates	14 0 0	
"General" account	6 7 6	
By— Charged to Sheep		60 0 0
" next crop		53 19 1
" 2nd crop		50 0 0
	£163 19 1	163 19 1

SHEEP No. 1. 1917-18 (Winter).		
To Valuation, 42 head Michaelmas, 1917	168 0 0	
151 purchased	486 17 6	
Labour	66 6 2	
Roots, proportion of cost	60 0 0	
Cake	124 16 3	
Straw chaff	10 0 0	
Use of hurdles, troughs, &c.	5 0 0	
By— 155 sold for		788 12 9
8 culls kept later		32 0 0
6 died		
24 went off roots with lamb		120 0 0
Wool off 32		11 13 9
Balance "profit"	31 6 7	
	£952 6 6	952 6 6

OATS No. 1. (14 Acres) after roots. 1918.		
To Proportion root crop costs	53 19 1	
Plough £14 12s. 8d, cultivation and drill £7 6s. 6d.	21 19 2	
Seed, 47 bushels	17 16 8	
Roll 19s. 3d., thistling £3 4s. 1d.	4 3 4	
Rent and rates	17 10 0	
Harvesting complete	12 7 0	
Thresh and deliver	9 13 9	
"General" account	11 5 4	
By— 75 qrs. oats, 50s.		187 10 0
Straw @ 10s. acre		7 0 0
Balance "profit"	45 15 8	
	£194 10 0	194 10 0

BARLEY No. 1. (14 acres) after Oats. 1919.		
To Proportion root costs	50 0 0	
Plough £16 1s. 8d, drill and cultivation £3 19s. 1d.	20 0 9	
Artificial manure £20 2s. 6d., crush and sow it £1 10s. 6d.	21 13 0	
Seed, 33 bushels @ 84s. qr.	17 17 0	
Roll £1 3s. 1d., docks and thistles £5 17s 2d	7 0 3	
† Cut roads round and shock up 5s. per acre	3 10 0	
† Cut with binder @ 4s. 2d per acre	2 18 4	
† Binder twine 6s. "	4 4 0	
† Carting 10s. 11d. "	7 12 10	
† Thatching, straw—cart straw and water	8 8 0	
† Threshing 14s. per acre	9 16 0	
† Delivery 4s. "	2 16 0	
Rent and rates	17 10 0	
"General" account	14 0 0	
By—Estimated 42 qrs. barley @ 67s. about Government price		140 14 0
Straw		7 0 0
Balance, loss		39 12 2
	£187 6 2	187 6 2

† These operations are, of course, estimates, as the crop is still growing. Men at 1s. per hour. Horses at 5s. per day.

SUMMARY OF BALANCES of foregoing operations

		"Profits." £ s. d.	"Losses." £ s. d.
In 1917.	14 acres Roots		
In 1917-18.	Sheep eating roots	31 6 7	
In 1918.	Oats	45 15 8	
In 1919.	Barley		39 12 2
		£77 2 8	39 12 2
	"Profits"	77 2 8	
	"Losses"	39 12 2	
Total "profits" on the 14 acres in 3 years		£37 10 1	

No charge for Interest.
" Management.
" Work of self and son when harvesting and threshing.

BARLEY No. 2.

COST OF GROWING 16 ACRE FIELD OF BARLEY, 1919.

	£ s.
Ploughed by Tractor, charged 25s.	20 0
Drag, 3 times, drill, harrow and roll	11 4
Crush and sow manure	3 6
Pull docks	1 19
Seed barley, 10½ sacks, 84s. per qr.	19 10
Manure, 3 tons super. 1½ tons sul./ammonia	43 2
Rents and rates	20 0
Actual expenses to August 13th, 1919	119 3

Estimated Cost of Harvesting and Threshing, &c.

	per acre. £ s.
Cut roads round and shock-up	5 0
Cutting with binder	4 2
Binder twine	6 0
Carting	10 11
Thatching straw, cart, water and straw	12 0
Threshing	14 0
Delivery on rail	4 0
General account	1 0 0
16 acres @	3 16 1 — 60 17
Total	£180 0
Add Interest on Capital	9 0
Management and Son's work	20 0
Total cost	£209 0
Average cost per acre	13 1

Estimated yield 28 bushel per acre (possibly less).

Straw to be credited at 10s. per acre.

Average yield for 16 years—28½ bushel per acre.

BARLEY No. 3.

COST OF GROWING 40 ACRE FIELD OF BARLEY, 1919.

Actual Cost of Cultivation in Spring. (Fuller cultivation should have been given but the wet weather threw work behind and it had to be done with as little time and work spent on it as possible.)	£ s. d.	£ s.
Ploughing 40 acres (horses)	48 5 0	
Min. wage then 30s. Horses were charged 3s. per day only.		
Tractor ploughing, 9 acres, second time, charged 25s.	11 5 0	
Drag and drill and light harrow	11 17 2	
Mix and sow artificial manure	4 11 6	
Roll	3 9 3	
Pull docks and cut thistles	17 11 7	
Actual cost of the bare minimum cultivations done		96 19

Cost of Seed, Manure, &c.		
Seed, 25½ sacks @ 84s. qr. (bought)	53 11 0	
Manure 81 cwt. super £25 11s. 6d. 40½ sul./-amm. £31 17s. 10d.	57 9 4	
Part fallowing costs from previous year on part of the field	95 0 0	
50 loads dung on a part, 5s.	12 10 0	
Cart and spread the dung	4 8 6	
		222 18

Estimated Cost of Harvesting, &c.

	per acre. £ s.
Cut roads round and shock-up	5 0
Cut with binder	4 2
Binder twine	6 0
Carting	10 11
Thatching, straw, cart straw and water	12 0
Threshing	14 0
Delivery on rail	4 0
"General" account	1 0 0
40 acres @	3 16 1 — 152 3
Total	472 1
Add Interest on Capital	23 12
Management and Son's work	50 0
Total Cost	£545 13

Cost per acre £13 12s. 10d.

Estimated yield, 24 bushel per acre.

Average yield for 16 years—28½ bushel per acre.

Farm No. 1—*continued.*

"OVERTIME" TRACTOR ACCOUNT FOR 2 YEARS, JAN.–DEC., 1916, and JAN.–DEC., 1917.

TO FIRST COST:

	£ s. d.	*Dr.* 1st Yr. £ s. d.	*Dr.* 2nd Yr. £ s. d.
Tractor	285 0 0		
Plough	33 15 0		
Extras	5 4 0		
Cultivator	19 0 0		
Paraffin tank	9 10 0		
		352 9 0	
Valuation of Outfit, £352 9 0			
Less depreciation: at 5*s.* acre on ploughing; 5*s.* cultivating; 5*s.* day threshing	85 13 9		
At beginning of second year			266 15 3
Interest on £350 @ 5%		17 10 0	
" " £266 @ 5%			13 6 0
Paraffin		68 19 6	87 18 2
Petrol		12 0 1	9 18 7
Oil, grease, shares and small sundries...		34 19 6	13 1 4
Repairs—parts and mechanic's time ...		34 17 3	61 1 7
Labour		31 18 3	25 18 8
		£552 13 7	477 19 7

BY WORK DONE:

(As charged to respective crops).

	Cr. 1st Yr. £ s. d.	*Cr.* 2nd Yr. £ s. d.
205½ acres ploughed 15*s.*, 18*s.*, 20*s.*, 25*s.*	175 7 6	
56 acres cultivated 7*s.* 6*d.*, 10*s.*... ...	22 5 0	
13½ days threshing, 15*s.*, 26*s.*	11 1 3	
5½ days cutting corn	5 10 0	
62½ acres ploughed for Food Production Authorities @ 7*s.* 6*d.*, they finding all but tractor and men. We received £5 to put small repairs right ...	28 8 9	
Ditto.		
101 acres ploughed, 20*s.*, 25*s.*		114 10 0
36 acres dragged, 5*s.*		9 0 0
39 acres cultivated, 10*s.*		19 10 0
15¾ days threshing, 25*s.*, 30*s.*		19 12 6
92 acres corn cut 5*s.*		23 0 0
	£242 12 6	185 12 6
Valuation of Outfit end of 1st year. 352/9/0 minus 85/13/9, as opposite ...	266 15 3	
Valuation of Outfit end of 2nd year. £266 15 3		
Less depreciation at 5*s.* per acre for plough, 2*s.* 6*d.* cultivation, 1*s.* drag and cutting, 10*s.* day threshing 44 8 0		222 7 3
To balance being *Deficit*	43 5 10	69 19 10
	£552 13 7	477 19 7

Note by Farmer:

1st Year. 125 acres were charged only 15*s.*
25 " " " " 18*s.*
for ploughing, which was found to be too low.
If all the year's work had been charged on the higher scale, the machine would have about paid its way.

2nd Year. Repairs were heavy, and the outfit is probably not worth the figures put down by a good round sum.

Tractor cultivation is no cheaper (if as cheap) as horses, the advantage is in getting more work done at the best time, if (often a big *if*), the machine does not have a breakdown, more or less, at the critical time.

ACCOUNT OF WORK DONE BY NEW "TITAN" TRACTOR.—Jan. 1st to Aug. 7th, 1919.

Dr.	£ s. d.	£ s. d.
To Cost of Tractor	385 0 0	
Delivery of tractor	5 10 0	
Massey-Harris self-lift plough... ...	51 0 0	
		441 10 0
Interest on capital, about 7 months, 5% about		13 0 0
Paraffin, 953 gallons		63 3 8
Petrol, 20 gallons		3 4 8
Oil, grease and small sundries		31 12 7
Repairs		1 0 0
Labour		20 7 0
To Balance		40 15 7
		£614 13 6

Cr.	£ s. d.	£ s. d.
By Work done:—		
110 acres ploughed, 25*s.*		137 10 0
10 acres rolled, 3*s.*		1 10 0
43 acres dragged, 3*s.*		6 9 0
113 acres cultivated, 10*s.*		56 10 0
15 acres drilled, 3*s.*		2 5 0
17½ days threshing, chaffing and grinding, 30*s.* ...		26 5 0
Valuation of outfit say	£441 10 0	
Less depreciation, @ 5*s.* acre, on ploughing, 2*s.* 6*d.* acre on cult., 1*s.* drag, &c., 10*s.* day thresh, &c. ...	57 5 6	
		384 4 6
		£614 13 6

Note by Farmer.

I think my way of putting depreciation is too low. Next year, when heavier repairs may be expected, will probably wipe away this balance as well as next year's possible balance. If I was starting my machinery accounts now, after experience, I should depreciate at least 33⅓% per annum. Therefore, the charges for work done are too small.

Farm No. 1—*continued.*

CEREAL GROWING, 1918.

The following estimate has been submitted with a view to showing the apportionment of the costs in the case of cereals.

An estimate from experience of the time taken, and expense of operations in detail.

		s.	d.		Cost per acre. £	s.	d.
Daily Wage. Head carter ...		7	6				
Second ditto ...		7	0				
Other		6	6				
„		4	0				
Average		6	3				
	£	s.	d.				
1 plough, 1 man, per day ...		6	3				
2 horses, 5s.		10	0				
		16	3	to do ⅔ acre=	1	4	4
1 drag, 1 man		6	3				
3 horses		15	0				
	1	1	3	to do 8 acres=		2	8
1 drag again						2	8
1 harrow, 1 man		6	3				
2 horses		10	0				
		16	3	to do 10 acres=		1	7
1 ditto						1	7
Drilling, 2 horses		10	0				
2 men		12	6				
	1	2	6	to do 8 acres=		2	9
1 harrow as above						1	7
1 roll, 1 man		6	3				
2 horses		10	0				
		16	3	to do 8 acres=		2	0
Seed, 2½ bushels @ 80s. qr. ...					1	5	0
Artificial manure					1	10	0
Rent and rates					1	5	0
Thistle cutting and weeding ...						10	0
Cut roads round crop and shock up						5	0
Cut with binder, 2 men 1s. hr.	1	0	0				
6 horses ...	1	10	0				
	2	10	0	÷ 12 acres		4	2
Carting, 8 men	4	0	0				
3 lads	1	1	0				
6 horses	1	10	0				
	6	11	0	÷ 12 acres		10	11
Binder Twine						6	0
Thatching, straw-cart, water and straw						12	0
Threshing, 10 men	3	10	0				
Coal, 8 cwt. @ 2s. 3d.	0	18	0				
Hire Machine ...	4	0	0				
	8	8	0	÷ 12 acres		14	0
Winnow 1s. 6d., and deliver on rail 2s. 6d.						4	0
General account...						17	6
					£10	2	9
This is a low and careful estimate and makes the cost per acre to be					10	2	9
Add Interest on capital						7	0
Management						15	0
					£11	4	9

£1 10s. 0d. per acre spent on artificial manure will not leave the land in as good heart after growing the crop as it was before.

My average crops per acre for 16 years (1902–1917 inclusive) were :—

Wheat, 25·29 bushels per acre.
Barley, 28·64 „ „
Oats, 43·97 „ „

FARM No. 2.

County, GLOUCESTER.

Size of Farm : 192 acres Arable, 57 acres Pasture.

Soil : Light loam on red sandstone.

System of Farming : Cropping and Sheep Feeding for Manure.
Rotation : Roots (folded), Oats, Seeds, Wheat, Barley.

WHEAT No. 2.

COST PER ACRE OF WHEAT AFTER CLOVER LEA—1919 CROP.

	£	s.	d.	£	s.	d.
Rent, 35s., Rates, 8s.				2	3	0
Manures.						
12 loads (15 cwt. each) Dung from Stores at 6s.	3	12	0			
Carting and applying	1	0	0			
4 cwts. Salt per acre applied		10	6			
				5	2	6
Seed.						
10½ pecks at 80s. per qr. plus dressing				1	7	0
Cultivations.						
Plough, 2 horses, ⅓ acre per day ...	1	5	0			
Roll, 3 horses		4	0			
3 Harrows, 10 acres per day		6	0			
Drill, 9 acres per day		3	0			
Roll		3	0			
Harrow		2	0			
Weeding		5	6			
				2	8	6
Harvesting.						
Reaping, including twine		12	0			
Stooking		2	6			
Carting and putting in barns		9	6			
				1	4	0
Threshing					16	0
Carting to Station					4	9
Proportion of cost of lime ⅛ of 30s. per acre					6	0
General Expenses					5	0
Implements and Machinery					7	6
Interest on Capital					11	6
Management				1	0	0
Total Cost				15	14	6
Deduct Unexhausted Manure				1	3	0
Net Cost				14	11	6

Yield per acre, 1919 ... ... 36 bush. grain. 16 cwts. straw.
Average yield over 5 years ... 33 bush. grain. 20 cwts. straw.

BARLEY No. 4.

COST PER ACRE OF BARLEY AFTER WHEAT—1919 CROP.

	£	s.	d.	£	s.	d.
Rent, 35s., Rates, 8s.				2	3	0
Manure. From Wheat	1	3	0			
3 cwt. Barley manure applied	1	10	0			
				2	13	0
Seed. 3 bush. at 9s. plus dressing ...				1	8	0
Cultivations. Autumn.						
2 Scuffles		12	0			
1 Drag		4	0			
2 Harrows		5	0			
2 Chain Harrows		4	0			
Weeding		4	0			
Winter—Plough	1	4	0			
Spring—Plough	1	0	0			
2 Scuffles		10	0			
1 Drag		4	0			
2 Harrows		4	6			
Drill		3	0			
2 Rolls, 3 horses and 2 horses		5	6			
				5	0	0
Harvesting				1	1	6
Threshing					15	0
Carting to Station					3	0
General Expenses					5	0
Implements					7	6
Interest					7	0
Management				1	0	0
Net cost ...				£15	3	0

Average yield, 1919 ... ... 30 bush. grain. 13 cwts. straw.
Average yield over 5 years ... 32 bush. grain 15 cwts. straw.

FARM No. 3.

unty, WORCESTERSHIRE.

1919 COSTS.

CROPS AND STOCKS.

Size of Farm: 167½ acres arable. 87½ acres pasture. 15 acres grass orchard. 20 acres very poor grass land. 10 acres waste.
System of Farming: Chiefly cropping, also fattening.

	£
Rent, £450.	
Apportioned—House	20
Buildings	30
Cottages	20
Land	380

	£	*s.*	*d.*
Rates, £54 9*s.* 0*d.*			
Apportioned—Buildings	11	1	0
Land	41	4	6
Cottages	2	3	6

Cost of horse per working day = 5*s.* 6*d.*
Cost of waggoner per day of 9½ hours = 7*s.* in crop costings.
Cost of general workers per day of 9½ hours = 6*s.* 6*d.* in crop costings.

Per acre.	£	*s.*	*d.*	Estimated yield.
Cost of wheat ...	16	13	10	4 qrs. grain, 20 cwts. straw.
Cost of oats ...	16	7	10	4 qrs. grain, 18 cwts. straw.
Cost of hay seeds ...	13	2	1	(Both crops), 30 cwt.
Cost of potatoes ...	37	8	9	6 tons seed and ware, 1 ton pig potatoes.
Cost of swedes ...	19	8	10	15 tons per acre.
Cost of turnips for sheep feeding. ...	9	12	5	9½ tons per acre.

Beef. Cost per live cwt. of fat beast = £4 17*s.* 6*d.*
Mutton. Cost per lb. of mutton = 1*s.* 7*d.*

HORSE LABOUR No. 1.

COST OF HORSE LABOUR PER DAY, 1918–19.

(*a*) Winter period of 32 weeks (Oct.-May).
Ration.
Hay, 20 lbs. = 10 stones per week.
Oats, 12 lbs. = 2 bushels per week.
Cost of food, taken at ⅘th market price—Hay, 9½*d.* per stone; Oats, 5*s.* per bushel.

	s.	*d.*
10 stones hay @ 9½*d.* ... ... =	8	0
2 bushels oats @ 5*s.* ... ... =	10	0
	18	0

	£	*s.*	*d.*
32 weeks × 18*s.*	28	16	0

(*b*) Summer Period of 20 weeks (June-Sept.).
Ration.
Grass, *ad lib.*, @ 4*s.* per week.
Oats, ⅓ winter allowance.
Chaff, ⅓ winter allowance.
Cost of food.

	s.	*d.*
Grass	4	0
Oats	5	0
Chaff	2	0
	11	0

	£	*s.*	*d.*
20 weeks × 11*s.*	11	0	0
(*c*) Blacksmith, 5 sets shoes @ 8*s.*, and extras ...	2	5	0
(*d*) Saddler, say	1	0	0
(*e*) Vet., say	1	0	0
(*f*) Risk, 4½% on £100	4	10	0
(*g*) Depreciation, 10% on £100	10	0	0
(*h*) Interest on Capital, 5% on £100	5	0	0
(*i*) Sundry expenses @ 1*s.* per week	2	12	0
(*j*) Share of rent and rates on buildings	1	4	2
	£67	7	2

Litter = Manure produced.

aking 260 working days in a year—Cost per day is approx. 5*s.* 6*d.*

OTATOES No. 1.

COST OF GROWING POTATOES PER ACRE 1919.

	£	*s.*	*d.*
Rent of Land	1	10	3
Rates		3	4½
Manuring—			
10 tons of Farmyard Manure @ 10*s.*	5	0	0
1½ cwts. Sulphate of Ammonia @ 18*s.*	1	7	0
4 cwts. Superphosphate @ 6*s.* 9*d.*	1	7	0
2 cwts. Fine Dust @ 6*s.* 6*d.*		13	0
Application—Hauling out and sowing, farmyard manure 19*s.* 6*d.*, artificial 2*s.* 6*d.*	1	2	0
Carried forward ...	11	2	7½

	£	*s.*	*d.*
Brought forward ...	11	2	7½
Seed.			
Arran Chief Seed, 15 cwts. @ £9 10*s.*	7	2	6
Pitting until required		4	4
Bagging and hauling on to the field		8	6
Cultivations.			
Ploughing, half with 2 horses @ 5*s.* 6*d.*, 1 man @ 7*s.*; half with 3 horses 1 man, 1 boy—¾ acre per day	1	9	10
Harrowing (twice), 2 horses, 1 man, 1½ acres ...		3	0
Cultivating (twice), 4 horses, 2 men, 5 acres ...		15	0
Harrowing (twice)		3	0
Chain harrowing (twice)		3	0
Gathering weeds, etc.		6	0
Cultivating		7	6
Harrowing		1	6
Chain harrowing, gathering weeds, etc.		4	6
Opening up rows, 2 horses, 1 man, 5 acres		3	7
Planting, 2 women @ 4*s.*, 1 man 6*s.* 6*d.*, ¾ acre ...		14	6
Harrowing (twice)		3	0
Hoeing		7	6
Earthing up		3	0
Spraying		14	9
Digging, 3 horses, 1 man and a boy driving, 10 women @ 4*s.*, 10 others @ 3*s.*, 1½ acres per day ...	3	3	10
Hauling to "bury," 3 horses, 3 men, 1½ acres per day	1	4	0
Covering in 2 men and straw @ say, 3*s.* 6*d.*, 1½ acres per day		12	2
Finishing—Cultivating time 7*s.* 6*d.*, harrowing 1*s.* 6*d.*, picking up 4*s.*, gathering weeds etc., 3*s.* 6*d.*.... ...		16	6
Hedging @ 6*d.* per perch of 8 yards		6	6
Putting up for market—2 men, 2 women, 1½ to 2 tons per day = 12*s.* 6*d.* per ton	4	7	6
Hauling to Station (2½ miles) 5 tons per day, 2 horses and 1 man	1	5	2
Share of depreciation of implements		10	9
Share of sundry expenses		10	0
Interest @ 5% on average outlay		18	0
Management, say, £300 over 255 acres	1	3	6½

	£	*s.*	*d.*	£	*s.*	*d.*
				£33	15	7
Less part cost of cleaning land ...		13	6			
Less part cost of farmyard manure ...	1	13	4			
				2	6	10
				£37	8	9

Estimated crop about 6 tons seed and ware and 1 ton pig potatoes.
Average over 4 years, 7 tons seed and ware.

WHEAT No. 3.

COST OF GROWING WHEAT PER ACRE 1919.

	£	*s.*	*d.*
Rent of Land	1	10	3
Rates		3	4½
Manures.			
3 cwts. Super Phosphate @ 6*s.* 9*d.*	1	0	3
2 cwts. Sulphate of Ammonia @ 18*s.*	1	16	0
Residue from farmyard manure applied to potatoes	1	13	4
Seed, 3 bushels @ 10*s.*, pickling 2*s.* 6*d.*....	1	12	6
Cultivations.			
Part cost of cleaning potatoes		10	0
Ploughing	1	4	0
Rolling		2	0
Drilling seed		3	4
Harrowing in seed		1	6
Bird scaring		2	6
Finishing for winter		2	6
Harrowing in spring		3	0
Rolling in spring...		2	0
Harvesting (1918 = 34*s.* 3*d.*) + 1*s.* 5*d.* for increased wages	2	1	1
Thatching		2	9
Thrashing. Tractor, box and straw binder @ 70*s.* per day, also 7 men, 1 boy, and string = labour and machines 3*s.* 11*d.*, string 1*s.* 3*d.* per qr.	1	0	8
Delivery to station, 2¾ miles		5	0
Share of depreciation of implements		10	9
Share of sundry expenses		10	0
Share of expenses of management	1	3	6½
Interest on average outlay 5% on £12		12	0

	£	*s.*	*d.*
	£16	12	4
Add application of manures, carting and sowing ...		1	6
	£16	13	10

Estimated crop about 4 qrs. grain and 1 ton straw.
Average over 4 years, 34 bush. grain, 25 cwt. straw.

Farm No. 3—*continued.*

ROOTS No. 2.

COST OF GROWING SWEDES PER ACRE, 1919.

	£	s.	d.
Rent of land	1	10	3
Rates		3	4½
Manuring—			
2 cwts. Flue Dust @ 6s. 6d.		13	0
4 cwts. Basic Slag @ 4s. 2d.		16	8
5 cwts. Crushed Limestone @ 1s. 6d.		7	6
3 cwts. Super phosphate @ 6s. 9d.	1	0	3
1 cwt. Sulphate Ammonia @ 18s.		18	0
Application of manures		7	6
Seed—3 lbs. @ 2s. 6d.		7	6
Cultivations.			
Ploughing, 2 horses, 1 man, ¾ acre per day	1	4	0
Harrowing, 2 horses, 1 man, 12 acres per day (twice)		3	0
Cultivating, 4 horses, 1 man, 5 acres (twice)		15	0
Harrowing (twice)		3	0
Chain harrowing (twice)		3	0
Gathering weeds, &c.		6	0
Cultivating		7	6
Harrowing		1	6
Chain harrowing, gathering weeds, &c.		4	6
Opening up rows (2 horses, 1 man, 5 acres)		3	7
Rolling		2	0
Sowing Seed		2	5
Singling	1	10	0
Scuffling, 1 horse, 1 boy, 2 acres		4	5
Weeding		5	0
Pulling, topping and tailing	1	10	0
Carting off and pitting (3 men, 3 horses, 1 man filling, 2 men pitting, straw 3s. 6d.)	3	0	6
Spreading leaves		2	6
Hedging, 6d. per perch of 8 yards		6	6
Hauling to cattle sheds, 1 horse, 1 boy, half acre		17	8
Share of depreciation of implements		10	9
Share of sundry expenses		10	0
Interest on average outlay, 5 % on £10		10	0
Management, say £300 per annum over 255 acres	1	3	6½
	20	10	5
Less part cost of clearing 13 6			
" " slag and limestone 8 1	1	1	7
	£19	8	10

Estimated Yield about 15 tons.

OATS No. 2.

COST OF GROWING OATS PER ACRE, 1919 (AFTER POTATOES).

	£	s.	d.
Rent of Land	1	10	3
Rates		3	4½
Manures—			
3 cwts. Superphosphate @ 6s. 9d.	1	0	3
2 cwts. Sulphate of Ammonia @ 18s.	1	16	0
Residue from Farmyard Manure applied to potatoes	1	13	4
Seed. 5 bushels @ 7s. 6d.	1	17	6
Cultivations—			
Part cost of cleaning potatoes		10	0
Ploughing	1	4	0
Harrowing (twice)		3	0
Drilling the seed		3	4
Harrowing in the seed		1	6
Rolling		2	0
Harvesting. As for wheat	2	1	1
Thatching		2	9
Thrashing. 4 qrs. @ 5s. 2d.	1	0	8
Delivering to station (if sold) 2¾ miles		5	0
Share of depreciation of implements		10	9
Share of sundry expenses		10	0
Share of expenses of management	1	3	6½
Interest on average outlay (5 % on £8)		8	0
	£16	6	4
Add cost of applying manures, carting and sowing		1	6
	£16	7	10

Estimated crop 4 qrs. grain and 1 ton straw (probably less than 1 ton straw). Drought and frit fly prevented full growth.

Average, over 4 years, 42 bush. Grain.
30 cwts. Straw.

SEEDS HAY No. 1.

COST OF GROWING SEEDS HAY PER ACRE, 1919.

	£	s.
Rent of Land	1	10
Rates		3
Manures.		
4 cwts. Basic Slag @ 4s. 2d.		16
1½ cwts. Sulphate of Ammonia @ 18s.	1	2
Hauling in and out and sowing		1
Seeds.		
Clover and grass	1	18
Mixing and sowing		1
Harrowing in the seeds		1
Rolling		1
Rolling in autumn or spring		1
Cutting and Stacking.		
47 man days, 21 horse days, to get in 15 acres	1	9
Thatching, straw and pegs		2
Cutting and Stacking second crop	1	1
Thatching second crop		1
Trussing, loading and hauling to station, 2¾ miles	1	14
Share of depreciation of implements		10
Share of sundry expenses		10
Share of expenses of management	1	3
Interest on average outlay, 5 % on £6 10s.		6
	£13	2

Estimated yield from both crops, 1½ tons. Low yield owing drought.

BEEF No. 1.

ESTIMATED COST OF FEEDING BULLOCKS, 1919-20.

	£	s.
(*a*) Bunch of 12 stores, weighing on the average 5¾ cwts. each, were bought early in April @ £22 7s. 6d., carriage home, &c., about 3s. each	22	10
They grazed days, in nights, during April. Rough keep in the yards = 1¼ cwts. straw per week @ 2s. 6d. = 3s. 1½d.		
They were in the yards about 5 weeks		15
Labour for the 5 weeks		4
Rent of land used for summer grazing	1	10
Rates on land used for summer grazing		3
Labour while in the fields		4
Hedging		2
Wire		1
Sundry expenses (share of)		10
Share of expenses of management		11
	£26	13

Litter in the Spring = Manure.

(*b*) Yard Feeding.

Ration—		
112 lbs. swedes @ 27s. 6d. per ton = per week, 7 cwts. at 1s. 4½d.		9
14 lbs. oat straw @ 50s. per ton = per week, ¾ cwt. at 2s. 6d.		2
2 lbs. Dec. Cott. Cake @ £26 10s. per ton = per week, ¼ cwt. @ 26s. 6d.		3
8 lbs. litter @ 40s. per ton = per week, ½ cwt. @ 2s.		1
		16
Store Bullock, 7½ cwts.	26	13
Attendance @ 2s. per week, and food = 18s. 2d. per week.		
Food and attendance, 25 weeks	22	14
Risk at 5 %	1	6
Share of rent and rates on buildings		10
Share of expenses of management		11
	£51	15
Fat Bullock, 10 cwts. @ 95s.	47	10
Manure, 6 tons at 10s.	3	0
Deficit	1	5
	£51	15

Cost per live cwt. = 97s. 6d.

Farm No. 3—*continued.*

ROOTS No. 3.

COST OF GROWING TURNIPS, AND RETURN FROM SHEEP-FEEDING 1919-20.

	£	s.	d.
Rent	1	10	3
Rates		3	4½
Manuring.			
2 cwts. Flue Dust @ 6s. 6d.		13	0
5 cwts. Ground Limestone @ 1s. 6d.		7	6
3 cwts. Superphosphate @ 6s. 9d.	1	0	3
1 cwt. Sulphate of Ammonia @ 18s.		18	0
15 cwts. Shoddy @ 70s. per ton at station	2	12	6
Cartage and application of manures		12	0
Cost of seed, 2½ lbs. @ 2s. 6d.		6	3
Sowing Seed		2	5
Cultivations.			
Fallowing expenses	4	2	6
Cutting out plants		10	6
Scuffling, 1 horse, 1 boy, 2 acres daily		4	5
Weeding		5	0
Scuffling		4	5
Share of costs of hedging		6	6
Share of depreciation of implements		10	9
Share of sundry expenses		10	0
Share of expenses of management	1	3	6½
Interest on average cost, 5% on £8		8	0
	£16	11	2

	£	s.	d.	
Less cost of manures—Shoddy	2	12	6	
Artificials	2	18	9	
Less ¼ cost of cleaning	1	7	6	
				6 18 9
				£9 12 5

Yield about 9½ tons per acre. Drought prevented good germination.—Cost per ton = 20s.

MUTTON No. 1.

Outlay.

Ration per day for 16 wks.

	s.	d.
½ lb. D.C. Cake = ½ cwt. @ 26s. 6d.	13	3
½ lb. Hay = ½ cwt. @ 12s.	6	0
14 lbs. Roots = 14 cwts. @ 20s.	14	0
	33	3
Shepherd, 1½d. per head per week	2	0
Carting hay, etc., 1d. per head per week	1	4
Deaths, etc., 1d. per head per week and share of cost of marketing, 1s.	2	4
	38	11
Less manurial value of cake 1s. 4d., hay 6d.	1	10
	37	1

Return.

Taking 1 lb. increase for 8½ lbs. dry matter fed, and 68 % increase as mutton, the sheep puts on 20½ lbs. mutton at a cost of 1s. 9½d. per lb. Allowing 2½d. per lb. for value of skin, the net cost per lb. is 1s. 7d.

NOTE.—This costing is based upon very moderate feeding compared with the expected increase in live weight per head per week of about 2½ lbs. No allowance for interest or management.—J. W.

FARM No. 4.

County, WILTS.

SHEEP No. 2. Size of Farm : 1,500 acres.

System of Farming : Corn growing, sheep breeding and feeding for manure.

SHEEP ACCOUNT FOR YEAR ENDED 12th AUGUST, 1919.

Valuation 12th August, 1918.	£	s.	d.
To 300 registered Hampshire ewes @ £5 each	1,500	0	0
18 acres turnips @ £3 per acre (seed and tillages)	54	0	0
24 „ „ „ „ „ „	72	0	0
16 „ swedes @ £3 10s. „ „	56	0	0
62 „ grazing @ £1 (second year clover)	62	0	0
40 tons mangolds over same	80	0	0
20 „ „ in lambing pens, &c.	40	0	0
45 „ prime seeds, hay	360	0	0
16 „ spring vetches (seed and tillages) (24 bush. seed @ 34s. per bush.)	64	16	0
20 acres second cut clovers	40	0	0
12½ tons linseed cake	248	12	5
2 „ pea chaff for lambs	49	0	0
1 „ cotton cake	14	19	6
15 qrs. peas	60	0	0
Shepherd's wages and extras	95	15	0
Extra Shepherd for 10 weeks	17	10	0
Shepherd's lambing money	5	10	0
Dipping, tailing and shearing	9	9	5
Extra labour for carting straw, hurdles, water and fixing up lambing pens	20	0	0
156 acres other grazing @ 10s.	78	0	0
	£2,927	12	5

	£	s.	d.
By 272 ewes and 5 rams sold	1,165	3	6
194 lambs	510	18	6
Skins	5	0	0
Wool	199	0	0
Manurial value, say	150	0	0
	£2,030	2	0

Deficit ... ... £897 10s. 5d.

No allowance has been made for straw for litter, general charges, interest on capital and management.

NOTE.—This flock has now been sold off.

FARM No. 5.

County. LEICESTERSHIRE.

Size of Farm: 257 acres arable. "Three-horse land."
258 acres pasture.

HORSE LABOUR No. 2

Value of Horse, £100.

Winter months, 32 weeks.

	£	s.	d.
2 tons 16 cwt. of seeds @ £6, *i.e.*, 28 lb. per day, including chaff	16	16	0
9 qr. oats of 336 lb. @ 50*s.* per qr., *i.e.*, 14 lb. per day	22	10	0
8 cwt. of bran @ 15*s.* per cwt. (4 lb. per day) ...	6	0	0
Summer keep, 20 weeks.			
2 qr. oats @ 50*s.* (7 lb per day)	7	10	0
2 acres grazing @ 30*s.*	3	0	0
Shoeing, per horse per annum, as per bills ...	4	0	0
Harness and repairs	3	0	0
Depreciation, 10 %, including veterinary attendance	10	0	0
	£72	16	0

Working days, 200; cost per day 7*s.* 3*d.*

NOTE.—Actual costs charged on whole course. Nothing charged for interest on capital or for management.

COST OF PRODUCTION THROUGH A FIVE COURSE ROTATION ON HEAVY LAND—1919 CROPS.

FIRST COURSE—FALLOWS.

Implements used.	Horse Labour.	Man.	Work done. Acres.	Cost per Acre. £	s.	d.
One Ploughing	4 @ 7*s.* 3*d.*	1 @ 7*s.* 3*d.*, 1 @ 4*s.* 6*d.*	¼	4	1	6
2nd Ploughing.	2 @ 7*s.* 3*d.*	1 @ 7*s.* 3*d.*	¼	1	9	0
3rd Ploughing	2 @ 7*s.* 3*d.*	1 @ 7*s.* 3*d.*	¼	1	9	0
4th Ploughing	2 @ 7*s.* 3*d.*	1 @ 7*s.* 3*d.*	¼	1	9	0
One Scuffling	4 @ 7*s.* 2*d.*	1 @ 7*s.* 3*d.*, 1 @ 4*s.* 6*d.*	6		6	8
Rent					15	0
Rates					2	6
Establishment Charges, such as Hedges, Ditches, unprofitable work, wet time, &c.				1	0	0
Wear and Tear, Implements, repairs, renewals, tools, &c.					10	0
				£11	2	8

To carry forward—to Wheat £7 8 5
„ Seeds 3 14 3.

WHEAT No. 4.

SECOND COURSE—WHEAT.

Implements.	Horse.	Man.	Work done. Acres.	Cost per Acre. £	s.	d.
One Harrow	2 @ 7*s.* 3*d.*	1 @ 6*s.* 1*d.*	10		2	0
One Drill	4 @ 7*s.* 3*d.*	2 @ 7*s.* 3*d.*, 1 @ 4*s.* 6*d.*	8		6	0
One Harrow	2 @ 7*s.* 3*d.*	1 @ 6*s.* 1*d.*	10		2	0
Seed Wheat, 2 bush. @ 11*s.* 6*d.*				1	5	0
Wheat Dressing						8
Bird Scaring					2	6
Spring Cultivation.						
One Harrow	2 @ 7*s.* 3*d.*	1 @ 6*s.* 1*d.*	10		2	0
One Cambridge Roll ...	3 @ 7*s.* 3*d.*	1 @ 6*s.* 1*d.*	8		3	6
Weeding					4	0
Harvest.						
Mowing round					2	0
Binder Twine, 5½ lbs. @ 115*s.* per cwt (best twine)					5	6
Binder depreciation, cost £70, life 8 years					2	0
Cutting	6 @ 7*s.* 3*d.*	1 @ 12*s.*, 1 @ 11*s.*	8		10	0
Stooking and re-stooking, including tying loose sheaves					4	0
Carrying	4 @ 7*s.* 3*d.*	1 @ 11*s.*, 2 @ 12*s.*, 2 @ 7*s.*	9		12	6
Raking and carrying same					3	0
Thatching, including pegs and string, 8 acres per stack					4	0
Threshing	1 @ 7*s.* 3*d.*	9 @ 8*s.*, 1 @ 5*s.*	8			
Coal, 20*s.*, Sack line, 10*s.*, Tackle and 2 men, 70*s.* per day.				1	3	0
Delivery, 5½ miles	2 @ 7*s.* 3*d.*	1 @ 7*s.* 3*d.*	10 qrs. per day.		9	9
Rent and rates					17	6
Establishment charges				1	0	0
Wear and tear					10	0
Brought forward from fallows				7	8	5
				£15	19	4

Average yield, 36 bushels.

SEEDS, HAY No. 2.

THIRD COURSE—SEEDS.

Implements.	Horse.	Man.	Work done Acres.	Cost per Acre. £	s.	d.
Seeds sown, 1918, 6 lbs. Red clover @ 2*s.*, 6 lb. Alsyke @ 1*s.* 6*d.* 1 peck of Italian Rye grass, 2*s.*				1	3	0
Drilling	2 @ 7*s.* 3*d.*	1 @ 6*s.* 1*d.*, 1 @ 5*s.*	10		2	6
1 Harrow (light) ...	1 @ 7*s.* 3*d.*	1 @ 5*s.*	10		1	3
1 Roll (light)	1 @ 7*s.* 3*d.*	1 @ 5*s.*	8		1	6
Harvesting, 1919.						
1 Grass mown ...	2 @ 7*s.* 3*d.*	1 @ 7*s.* 3*d.*, 1 @ 6*s.* 1*d.*	6		4	8
Turning, carting and stacking—estimate according to season				1	5	0
Thatching, pegs, string, &c.					3	0
Rent and rates					17	6
Establishment charges				1	0	0
Wear and tear					10	0
Brought forward from fallows				3	14	3
				9	2	8
To carry forward to Wheat crop				1	10	0
				£7	12	8

Average crop 1 ton 5 cwt.
Assuming good quality and got well.

WHEAT No. 5.

FOURTH COURSE—WHEAT.

Implements.	Horse.	Man.	Work done. Acres.	Cost per Acre. £	s.	d.
1 ploughing, before Aug. 1st.	3 @ 7*s.* 3*d.*	1 @ 7*s.* 3*d.*, 1 @ 4*s.* 6*d.*	¼	2	4	8
1 scuffle	4 @ 7*s.* 3*d.*	1 @ 7*s.* 3*d.*, 1 @ 4*s.* 6*d.*	6		6	9
2nd scuffle	4 @ 7*s.* 3*d.*	1 @ 4*s.* 6*d.*	6		6	9
1 drag Harrow	3 @ 7*s.* 3*d.*	1 @ 6*s.* 1*d*	8		3	6
Drilling	4 @ 7*s.* 3*d.*	2 @ 7*s.* 3*d.*, 1 @ 4*s.* 6*d.*	8		6	0
Seed Wheat.						
3 bushels at 11*s.* 3*d.*				1	13	9
1 harrow	2 @ 7*s.* 3*d.*	1 @ 6*s.* 1*d.*	10		2	0
2nd harrow	2 @ 7*s.* 3*d.*	1 @ 6*s.* 1*d.*	10		2	0
Wheat dressing						8
Bird scaring					2	6
Spring cultivation.						
1 harrow	2 @ 7*s.* 3*d.*	1 @ 6*s.* 1*d.*	10		2	0
1 Cambridge roll ...	3 @ 7*s.* 3*d.*	1 @ 6*s.* 1*d.*	8		3	6
Weeding					6	0
Sulphate ammonia, 1 cwt. per acre					17	6
Carting and sowing same					1	6
Harvesting, threshing, and delivering				3	16	3
Rent and rates					17	6
Establishment charges				1	0	0
Wear and tear					10	0
Brought forward from seeds				1	10	0
				£14	12	10

Average yield, 32 bushels.

OATS No. 3.

FIFTH COURSE—OATS.

Implements.	Horse.	Man.	Work done. Acres.	Cost per Acre. £	s.	d.
Manure carting.						
3 or 4 carts ... ... (12 tons per acre) ...	4 @ 7*s.* 3*d.*	1 @ 7*s.* 3*d.*, 3 @ 6*s.* 1*d.*, 1 @ 4*s.* 6*d.*	3, 36 tons		19	8
Spreading		1 @ 6*s.* 1*d.*	1		6	1
Ploughing	3 @ 7*s.* 3*d.*	1 @ 7*s.* 3*d.*, 1 @ 4*s.* 6*d.*	¾	2	4	8
Drilling	4 @ 7*s.* 3*d.*	2 @ 7*s.* 3*d.*, 1 @ 4*s.* 6*d.*	8		6	0
1st drag harrow ...	3 @ 7*s.* 3*d.*	1 @ 6*s.* 1*d.*	8		3	6
2nd drag harrow ...	3 @ 7*s.* 3*d.*	1 @ 6*s.* 1*d.*	8		3	0
1 pair of horn harrows	2 @ 7*s.* 3*d.*	1 @ 6*s.* 1*d.*	10		2	0
Seed Oats.						
4 bushels at 9*s.*				1	16	0
Bird scaring					2	6
Spring cultivation.						
1 harrow	2 @ 7*s.* 3*d.*	1 @ 6*s.* 1*d.*	10		2	0
1 Cambridge roll ...	3 @ 7*s.* 3*d.*	1 @ 6*s.* 1*d.*	8		3	6
Weeding					10	0
Harvesting, threshing, and delivering				3	16	3
Rent and rates					17	6
Establishment charges				1	0	0
Wear and tear					10	0
				£13	3	2

Average yield 40 bushels per acre.

NOTE.—It will be noticed that only labour costs on dung have been charged, according to the custom of the district.

FARM No. 6.

County, BERKSHIRE.

MILK No. 1.

Size of farm—550 acres (166 arable, 384 pasture).

System—To grow the most suitable foods to maintain the herd of cows and stud of Shire horses. No absolutely fixed system is pursued. The ploughing up orders upset the recent cropping.

Soil—Light gravel (part) and light loam on chalk (part).

Rent—£637 10*s*. Rates, £80 14*s*. 8*d*.

MILK PRODUCTION FROM MAY 1ST, 1918, TO OCTOBER 1ST, 1918.

A Period of 22 Weeks is taken to enable Milk Records to be used.

The average number of cows (includes heifers) during the period was 73.

The average number in milk was 81 per cent. of the total.

The average number dry was 19 per cent. of the total.

Horse labour is based on Costs already sent in, viz.; 32*s*. 1*d*. per week which, after allowing for broken time is reckoned at 7*s*. for every working day for each horse.

See Horse Labour Cost No. 1.

Labour Costs are based on the wages actually paid on the scale of wages current in the district. NOTE.—Stockmen are being paid not less than 3*s*. per week in excess of the scale laid down by the Central Wages Board for this County.

Management charges. The acreage of the farm is 550, and the Capital over £11,000. A total Management Charge of £600 for the whole year is made. Of this £300 is allocated to the management of the herd, *i.e.*, £6 per week (approx.).

SUMMARY OF COSTS.

	£	*s*.	*d*.
Foods, including Grazing	297	19	0
Work done on Pastures	65	8	0
Manures	215	1	3
Labour	179	14	6
Depreciation and Loss	260	0	0
Proportion of Rent on Buildings...	6	5	0
Keep of Bulls	33	0	0
Depreciation on Machinery and Utensils	21	5	0
Repairs and Renewals	22	4	0
General Expenses	239	18	0
Delivery Charges	48	14	0
	£1,380	8	9
Credits	61	0	0
	£1,328	8	9

DETAILS OF SUMMARY OF COSTS.

Foods.	£	*s*.	*d*.	£	*s*.	*d*.
Hay was fed for 3 weeks in May when cows were in water meadows. 5 lbs. of hay was fed to 65 cows, *i.e.*, 325 lbs. or say 3 cwt. per day at 5*s*. 6*d*. (includes tying), *i.e.*, 16*s*. 6*d*. for 21 days	17	6	6			
No Grain or purchased foods were used throughout the summer period as none could be bought.						
Grazing.						
70 acres of park land at £2	140	0	0			
40 acres meadows (irrigated) at £3...	120	0	0			
Aftermath. 55 acres at 7*s*. 6*d*. per acre	20	12	6			
				297	19	0
Work done on Pastures (or work connected with them).						
Rolling 70 acres (2 horses 14*s*., man 5*s*., will do 10 acres per day, *i.e.*, cost of rolling, 19*s*. × 7)	6	13	0			
Carried forward ...	6	13	0	297	19	0
Brought forward ...	6	13	0	297	19	0
Chain-harrowing 70 acres as for rolling	6	13	0			
Chain-harrowing the manured ground twice, *i.e.*, 40 acres, 19*s*. × 4... ...	3	16	0			
Hedges trimmed, 100 chain @ 1*s*. ...	5	0	0			
Hedges cut and laid, 11 chain @ 6*s*. ...	3	6	0			
Thistles cut on 70 acres @ 1*s*. per acre	3	10	0			
Thistles, docks and rough sedge cut on the 40 acres of irrigated meadows @ 4*s*.	8	0	0			
Cutting out the gutters in irrigated meadows and watering the same at a piece-work price per acre of 10*s*. ...	20	0	0			
Fencing gaps, posts, wire, nails and labour	6	0	0			
Ditches cleared out, 50 chain @ 1*s*. ...	2	10	0			
				65	8	0
Manures.						
Superphosphate, 5 tons @ £6	30	0	0			
Hauling from station home @ 4*s*. 9*d*. per ton	1	3	9			
Storing and powdering in spring @ 2*s*. 6*d*. per ton		12	6			
Distributing the same, 3 cwt. to acre...		15	0			
Farmyard Manure. 20 acres are dressed annually on an average at the rate of 15 tons per acre so that the whole of the pasture is dressed every 5 or 6 years, so 20 × 15 is 300 tons per annum @ 10*s*. gives total value of farmyard manure	150	0	0			
Cost of hauling @ 1*s*. 8*d*. per ton ... 4 horses 7*s*., @ 28*s*.; 3 men @ 6*s*., 5*s*., 3*s*., 14*s*.; 2 loading at 5*s*., 10*s*.; total, 52*s*. Quantity hauled per day, 30 tons.	25	0	0			
Cost of spreading manure @ 7*s*. 6*d*. per acre	7	10	0			
				215	1	3
Labour.						
Head cowman full time @ 38*s*. per week × 22	41	16	0			
Milking machine operator, 37*s*. per week, three-quarter time	30	11	6			
2 Strippers @ 34*s*. each (half-time only)	37	8	0			
1 Girl, part time, @ 6*d*. per hour, *i.e.*, 20*s*. × 22	22	0	0			
Overtime paid (*i.e.*, after 5 o'clock) ...	12	5	0			
Cost of running Milking Machine. Paraffin, 10 gals. per week @ 2*s*., 20*s*.; petrol, 2 gals. per week at 4*s*., 8*s*.; lubricating oil, 1 gal. per week @ 4*s*., 4*s*.; total cost per week therefore 32*s*.						
For 22 weeks, 32*s*. × 22	35	4	0			
				179	4	6
NOTE.—The cost of labour works out at 2*s*. 4*d*. per cow per week.						
Depreciation and Loss on Cows.						
The depreciation per cow is £8 11*s*. per annum or 14*s*. 3*d*. per cow per month, so 73 cows × 14*s*. 3*d*. × 5 months is the total depreciation for the period (£260 1*s*. 3*d*.), say ...	260	0	0			
				260	0	0
NOTE.—The basis of depreciation is calculated on the number of heifers brought into the herd annually to maintain its number.						
The whole question of depreciation is dealt with fully on an attached sheet.						
Proportion of Rent of Buildings.						
The house and buildings are rated @ £60. Of this £30 is put to the house, £12 to those parts of the buildings used for milk production, and £18 to those parts not used for milk production.						
Thus £12 per annum is £1 per month × 5	5	0	0			
Rates on ditto (5*s*. 4*d*. in £), say ...	1	5	0			
				6	5	0
Carried forward ...				£1,023	17	9

Farm No. 6—*continued.*

	£ s. d.	£ s. d.
Brought forward ...		
Keep of Bulls.		
2 Bulls are kept. They are house fed all the year at a cost of 15*s.* each per week, *i.e.*, 30*s.* × 22 weeks	33 0 0	33 0 0
Depreciation on Machinery and Utensils.		
The capital value of these is not less than £500 (increased to £600 for winter period), 10 % depreciation on £500 is £50 per annum or say £4 5*s.* per month × 5	21 5 0	21 5 0
Note.—A list of machinery and utensils is appended on a separate sheet.		
Repairs and Renewals.		
(*a*) Machinery. Principally renewal parts to milking machine, new rubbers, pulsaters, engine parts, etc., as per accounts	12 4 0	
(*b*) Implements and Utensils. 10 % on half the value of the implements and utensils (excluding milking machine which is covered under (*a*)), *i.e.*, 10 % of £250 or £25 per annum, *i.e.*, £2 per month × 5	10 0 0	22 4 0
General Expenses.		
Proportion fire insurance policies ...	3 0 0	
Workmen's Compensation, 17*s.* 6*d.* per £100 paid in wages. Wages £180 (approx.), say	1 10 0	
National Health Insurance at 1*s.* 4*d.* per week	1 9 4	
Veterinary account, drinks, oils, etc. ...	3 0 0	
Cost of whitewashing sheds and labour. Lime and materials 10*s.*, labour, 2 men at 5*s.* for 2 days ..	2 0 0	
Hay for newly-calved or sick cows, 10 cwt.	2 10 0	
Coal for heating water, 2 cwt. per month	1 5 0	
Soap, soda, cloths, brushes, strainer cloths and incidentals, 8*s.* per month × 5	2 0 0	
Milk Recording Society's fee, 4*s.* per cow (only half paid) per annum, *i.e.*, 4*d.* per cow per month × 5 ...	3 11 8	
Remuneration to weekly weigher for seeing milk weighed and entered, 5*s* per week	5 10 0	
Part upkeep of bye-roads used by cows, gravel drawn, mud scraped, etc.	5 0 0	
Shoeing horses used for work done to the pastures and manure hauled. 4 horses shod once each at 8*s* per set	1 12 0	
Stationery, billheads, stamps, etc. ...	10 0	
Management Charge, £6 per week × 22	132 0 0	
Interest on Capital.		
73 cows at £42 each, £3,066 ; 2 bulls, £50 each, £100 ; Machinery and implements, £500 ; Total, £3,666 ; at 5 %, say £15 per month × 5 ...	75 0 0	239 18 0
Delivery Charges.		
Cost of running milk cart to station twice daily (total miles, 8), 3*s.* per day. Man's part time, 3*s.* (Note.—Part of this sum is at overtime rate for evening delivery.) Total cost per week, 42*s.* × 22	46 4 0	
Cost of shoeing horse, one set per month	2 0 0	
Proportion milk cart insurance premium (25*s.*)	10 0	48 14 0
Gross Total		£1,388 18 9
Credits.		
(1) 18 live calves at 40*s.*	36 0 0	
(2) Grass left on pastures	25 0 0	61 0 0
Net Cost of producing 18,890 gals. of Milk		£1,327 18 9

Or Cost per Gallon, 16·87 pence.

MILK RECORDS OF COWS FROM MAY TO SEPTEMBER, 1918 (22 weeks weighings).

	Name of Cow.	Yield in lbs.	Weeks dry.	Weeks in Milk.	Date of Calving.	Depreciation for full period, 22 weeks, since calving.	
1	Topnote 6th ...	3947½	—	22	Mar. 1918	£6	£5
2	Dairymaid ...	4466	—	22	Oct. 1917	11	8
3	Lily	5622	1	21	May 1918	4	4
4	Buttercup 7th...	3918	—	22	April 1918	5	5
5	Fidget 6th ...	3029½	6	16	May 1918	4	4
6	Daffodil 2nd ...	4999½	—	22	Feb. 1918	7	5
7	Bessie	5057½	—	22	Mar. 1918	6	5
8	Tinker 6th ...	3694½	—	22	Mar. 1918	6	5
9	White Heather.	3645½	—	22	April 1918	5	5
10	Dairymaid 5th.	3386	—	22	Mar. 1918	6	5
11	Betsy	2292½	7	15	July 1918	2	1
12	Rosebud ...	3127½	6	16	May 1918	4	4
13	Flossie 2nd ...	3034	11	11	June 1918	3	3
14	Dairymaid 2nd.	1449	—	22	May 1917	12	9
15	Princess 14th ...	4407½	—	22	Mar. 1918	6	5
16	Polly 2nd ...	4285½	—	22	Mar. 1918	6	5
17	Polly 6th ...	2971½	—	22	Nov 1917	10	7
18	Woodbine 5th...	2089½	3	19	April 1918	5	4
19	Milkmaid .	834½	9	13	Oct. 1917	11	8
20	Strawberry 2nd	3939½	—	22	Mar. 1918	6	5
21	Nancy 7th ...	3633	—	22	Feb. 1918	7	5
22	Stag 8th ...	3139½	12	10	June 1918	3	3
23	Bluebell 2nd ...	1375	—	22	Sept. 1917	12	9
24	Mary	3475	—	22	Mar. 1918	6	5
25	Lucy 4th ...	2970½	—	22	Jan. 1918	8	6
26	Lily 2nd ...	4446½	—	22	Mar. 1918	6	5
27	Flossie 4th ...	3854½	—	22	Feb. 1918	7	5
28	Favourite 3rd...	6860½	—	22	Mar. 1918	6	5
29	Darling 2nd ...	1475½	4	18	Aug. 1918	1	1
30	Daffodil 3rd ...	626½	16	6	June 1917	10	7
31	Lassie	1942½	—	22	June 1917	12	9
32	Strawberry 3rd	1173½	9	13	Aug. 1918	1	1
33	Princess 16th ...	1263½	—	22	Aug. 1917	12	9
34	Favour.. ...	3042½	—	22	Mar. 1918	6	5
35	Buttercup 8th	1123½	3	19	Sept. 1917	12	9
36	Marvel... ...	747½	12	10	Oct. 1917	11	8
37	Polyanthus ...	1795½	3	19	Oct. 1917	11	8
38	Dairymaid 6th	2475½	—	22	Oct. 1917	11	8
39	Cowslip ...	679½	10	12	Nov. 1917	10	7
40	Brighteye ...	1716½	1	21	Nov. 1917	10	7
41	Brindle 6th ...	930½	13	9	Aug. 1918	1	1
42	Appleblossom...	2171½	1	21	Jan. 1918	8	6
43	Flower 2nd ...	2494½	—	22	Jan. 1918	8	6
44	Topnote 8th ...	3494	—	22	Jan. 1818	8	6
45	Sunbeam ...	2843½	—	22	Feb. 1918	7	5
46	Ivyleaf 3rd ...	1699½	3	19	Feb. 1918	7	5
47	Handsome 3rd .	1462½	3	19	Jan. 1918	8	6
48	Dairymaid 8th .	2750½	—	22	Jan. 1918	8	6
49	Favourite 5th...	3024	—	22	Feb. 1918	7	5
50	Bluebell 4th ...	3428½	—	22	Feb. 1918	7	5
51	Favourite 4th...	3094½	—	22	Feb. 1918	7	5
52	Polly 5th ...	3207½	—	22	April 1918	5	5
53	Pretty 8th ...	4786½	—	22	April 1918	5	5
54	Pretty 13th ...	2460½	1	21	Feb. 1918	7	5
55	Princess 15th ...	2880½	—	22	Mar. 1918	6	5
56	Pansy 4th ...	2830½	—	22	Mar. 1918	6	5
57	Favourite 6th...	3164	—	22	Mar. 1918	6	5
58	Red Rose 4th ...	2542½	—	22	Mar. 1918	6	5
59	Princess 17th ...	1751½	1	21	Mar. 1918	6	5
60	Jewel	3742½	—	22	Mar. 1918	6	5
61	Hyacinth ...	3435½	—	22	Mar. 1918	6	5
62	Quiet 7th ...	3099½	—	22	Mar. 1918	6	5
63	Milkmaid 2nd...	757½	17	5	Aug. 1918	1	
64	Princess 18th ...	806½	17	5	Aug. 1918	1	
65	May	390½	19	3	Aug. 1918	1	
66	Red Rose 5th ...	502½	19	3	Aug. 1918	1	
67	Bluebell 6th ...	540½	19	3	Aug. 1918	1	
68	Bluebell 5th ...	428½	19	3	Aug. 1918	1	
69	Buttercup 10th	369½	19	3	Aug. 1918	1	
70	Pansy 5th ...	449½	19	3	Sept. 1918	0	0
71	Lucy 5th ...	514½	19	3	Sept 1918	0	0
72	Nancy 8th ...	355½	20	2	Sept. 1918	0	0
73	Bluebell 3rd ...	3573	11	11	Aug. 1918	1	1
		188,902	333	1,273			£29

The total yield from 73 cows for 22 weeks was 18,890 galls.

The number of "dry" weeks was 333.

The number of milking weeks was 1,273.

So the average number dry is 19 per cent.

The average number in milk 81 per cent.

The two last columns have been added to show that if a summe herd were sold at Michaelmas the depreciation would probably h higher than has been allowed in my costings statement. It ma fairly be assumed that a cow will depreciate in saleable valu about £1 per month after calving. There will naturally be a bi appreciation in the cows' value immediately prior to calving c

mmediately after. If this system of calculating depreciation vere adopted losses through age and disease, accidents, etc., would ave to be taken into account but it would be an alternative ethod of valuing depreciation and loss to the one adopted.

Milk Records are taken under the auspices of the Berkshire Milk ecording Society.

DEPRECIATION AND LOSS ON COWS.

The amount of depreciation and loss on the herd per annum is ased on the number of heifers brought into the herd each year to naintain it at its average number.

In 1917 the number of heifers brought in was 27.

In 1918 the number of heifers brought in was 28.

It follows that if 28 were brought into the herd in 1918 an equal umber were drafted out. Following is a list of the cows which vere discarded with full information concerning them.

	Name of cow.	Date of calving.	Reasons for discarding.
1	Lucy 4th ...	Jan. 20th, 1918	Bad Milk record (371 glns. 1917).
2	Handsome 3rd ...	Jan. 31st, 1918	Bad milk record (251 glns. 1917).
3	Daffodil 2nd ...	Feb. 9th, 1918	Barren.
4	Flossie 4th ...	Feb. 6th, 1918	Bad milk record (406 glns. 1917).
5	Princess 15th ...	Mar. 3rd, 1918	Slipped calf prematurely.
6	Favourite 6th ...	Mar. 14th, 1918	Barren.
7	Quiet 7th ...	Mar. 7th, 1918	Came into season 11 mths. after calving.
8	Strawberry 2nd	Mar. 2nd. 1918	Barren.
9	Forest Fairy ...	Mar. 7th, 1918	Served 12 months after calving.
10	Polly 2nd ...	Mar. 31st, 1918	Barren.
11	Favour	Mar. 27th, 1918	Died.
12	Mary	Mar. 1st, 1918	Calved prematurely 1917 and 1918.
13	Buttercup 7th ...	Apl. 6th, 1918	Barren.
14	Polly 5th ...	Apl. 6th, 1916	Bad milk record (320 glns. 1917).
15	Woodbine 5th ...	Apl. 2nd, 1918	Bad milk record (480 glns. 1917).
16	Rosebud	May 20th, 1918	Bad milk record (352 glns. 1917).
17	Daffodil 3rd ...	Aug. 1918	Calved prematurely.
18	May	Aug. 19th, 1918	Bad milk record.
19	Dairymaid 1st ...	Aug. 30th, 1918	Calved prematurely.
20	Buttercup 10th ...	Sept. 2nd, 1918	Calved with 3 quarters.
21	Lucy 5th ...	Sept. 6th, 1918	Bad milker. Developed lump on jaw.
22	Brindle 7th ...	Sept. 14th, 1918	Bad milker.
23	Dairymaid 9th ...	Sept. 7th, 1918	Unsound.
24	Damsel 4th ...	Oct. 15th. 1918	Bad milker and kicker.
25	Pansey 5th ...	Sept. 6th, 1918	Calved with hole halfway up teat.
26	Marvel	Nov. 16th, 1918	Bad record (361 glns. in 1917).
27	Cowslip	Jan. 27th, 1919	Milk fever and slaughtered.
28	Appleblossom ..	Jan. 4th, 1919	Calved prematurely.

For the sake of comparison it may be noted that the 28 heifers which were brought into the herd calved as follows:—Feb. 4, Mar. 7, Aug. 6, Sept. 9, Oct. 1, Nov. 1—Total 28.

The above list of discharged cows is further analysed on another sheet.

No. of cow on list.		Loss.
11	Died, a total loss of	£42 0 0
17	Died, a loss of £42 *less* £36 received for carcase...	6 0 0
5, 2, 7, 8	Calved prematurely and written down to £20 each	88 0 0
9	3 qrs was allowed to go barren and written down to £22	20 0 0
10	Unsound (may be total loss when killed) valued at £10	32 0 0
23	Unsound (may be total loss when killed) valued at £10	32 0 0
15	Was written down to £24	18 0 0
	Carried forward ...	238 0 0
	Brought forward ...	238 0 0
24	Kicker, written down to £20	22 0 0
	Add here a pedigree bull which turned savage and had to be shot. Value £70 *less* £29 received for carcase	41 0 0
	Giving losses on 11 cows and 1 bull	£301 0 0
	The 17 Straight barrens are written down £18 each ...	306 0 0
	Giving a Total Yearly Depreciation of the Herd as ...	£607 0 0
	Deduct the depreciation for summer 5 months ...	260 0 0
	Leaving the depreciation for the winter 7 months ...	£347 0 0

This will work out at an average loss of £8 11*s.* per cow per annum or as taken 14/3 per cow per month.

The Straight barrens are thus given a market value at the time of going dry of £24 each.

Note.—Depreciation must vary on different farms.

Strong land will give a higher number of "wasters."

Luck enters largely. You may be free of losses one year and full of it the next. Abortion, Vaginitis, Garget, Cowpox, Tuberculosis, a non-getting bull and many other diseases, etc., may arise and a prudent man will write off each year a percentage to go to a reserve fund to meet such losses when they come as they will sooner or later in every herd.

The Stock Bull has a great influence. Some bulls never get heifers worth retaining. Others get a large percentage. On an average at least 40 per cent. of all heifers calving are worthless as milkers. Nor does it follow that a high record cow will breed high milking stock. There is no certainty of breeding a high milking heifer unless there are three generations of high milking dams behind her. Experience shows that no bull should be used unless the dam has been seen. The practice of buying bulls at collective pedigree sales have been followed here in the past with very negative results as far as milk production goes. It has been proved a failure and is now discontinued.

The average yield of cows in this country will never be very materially increased until milk recording becomes general and the price of milk is put at such a price that the producer can afford to give a high price for his stock bull.

Some remarks on the stock bulls used in this herd during the last 20 years are appended.

STOCK BULLS.

Lord Napier 83951 calved in 1894.

Nothing was known of the ancestors of this bull and he got very few heifers worth retaining.

Premier 81879 calved in 1892.

Nothing was known of this bull. He was bought on a long pedigree.

Crystal King 72308 calved in 1897.

Was a Scotch bull of beef type. He got magnificent cows but they never averaged 400 gallons per year. His influence was not eradicated for many years.

Vain Sultan 90392 calved in 1904.

Was out of a dairy cow which won many milking class prizes. He did a lot of good.

Bateman 94234 calved in 1906.

Was bought at a collective sale. Neither Sire nor Dam were seen. He got a few good cows but the majority were weeded out.

Vain Kirklevington 100942 calved in 1917.

Was homebred out of a 700 gallon cow. He got nearly all good heifers the first crop of which averaged over 500 gallons with their first calves. His value was not discovered until after he was sold.

Caliban 108095 calved 1909.

Was sired by a Scottish bred bull. None of his stock ever gave 600 gallons. In fact not more than half a dozen were retained.

Proctor 122175 calved 1912.

Was bred from an old milking strain. He got a lot of good heifers, probably the best ever bred here. He too was sold before his value was discovered.

Kelmscott Dairy Prince, Marquis and Grand Duke have since been used.

The dams of all three were seen and although too soon to say definitely the policy now pursued seems likely to be justified.

Form No. 6—*continued.*

MILK INHERITANCE.

Name of Cow.	Highest Yield. Gallons.	Name of Descendants.	Highest Yield. Gallons.
Polly 1st	970	Polly 2nd	624
		Polly 6th	784
		Polly 7th	450
		Polyanthus	528
Pretty 1st	928	Pretty 2nd	436
		Pretty 4th	639
		Pretty 5th	361
Dairymaid 1st	1397	Dairymaid 2nd	924
		Dairymaid 3rd	491
		Dairymaid 4th	387
		Dairymaid 5th	639
		Dairymaid 8th	458
Ruby	1092	Ruby 2nd	269
Brindle 2nd	724	Brindle 3rd	434
		Brindle 4th	267
Bluebell	1205	Bluebell 2nd	582
		Bluebell 3rd	555
		Bluebell 6th	420
Plum 4th	721	Plum 5th	576
Red Rose	1114	Red Rose 3rd	527
		Red Rose 4th	300
Fidget 6th	909	Sunbeam	477
		Princess 16th	461
Stag 7th	1089	Milkmaid	590
		Vanity	395
		White Heather	549
Flossie 2nd	735	Flossie 3rd	437
		Flossie 4th	468
Ivyleaf 1st	557	Ivyleaf 2nd	432
		Ivyleaf 3rd	290

This List rather shows that the yield of the dam is not a reliable indication of the probable yield of the daughters. It is a belief of the writer that selection must be carried through for at least three generations before milk inheritance becomes a fixed trait. When we can buy our stock bulls with three generations of heavy milking dams behind them we can hope to increase our herd average, which is the chief factor in reducing the cost per gallon.

LIST OF IMPLEMENTS AND MACHINERY IN USE.

	£	s.	d.
Milking Machine	250	0	0
Refrigerator	10	0	0
Separator	15	0	0
Small Cheese Plant	15	0	0
Churns and Butter Worker	10	0	0
Pans	3	0	0
Buckets	4	0	0
Miscellaneous	3	0	0
Milk Cart	20	0	0
Engine	40	0	0
Cake Crusher	15	0	0
Oat Crusher and Kibbler	10	0	0
Pulper for Roots	12	0	0
Chaff Cutters (2), part value, for cows	70	0	0
Portable Engine, part value	50	0	0
Part value, Horses, Carts, Roller, Harrow, etc., used for work done in connection with cows	115	0	0
Part value of Milk Cart Horse	40	0	0
Wheelbarrows	10	0	0
Cow Chains, Tools, etc.	5	0	0
	£697	0	0

For the purpose of arriving at the cost of milk production the value of the Implements and Machinery have been put at—

For the Summer Period £500
For the Winter Period £600

This has been done because many of the articles enumerated above are not used throughout both periods and are partly put to other uses.

MILK PRODUCTION FROM OCTOBER 1ST, 1918, TO JUNE 1ST, 1919.

A period of 30 weeks is taken to enable Milk Records to be used.

The number of cows milked was 70.

Foods.—A special memorandum is attached giving full details.

SUMMARY OF COSTS.

	£	s.
Foods	1,193	0
Depreciation and Loss on Cows	347	0
Labour	276	15
Depreciation, Implements and Machinery	35	0
Repairs	33	15
Keep of Bull	22	10
Proportion of Rent of Buildings	8	17
General Expenses	328	12
Delivery Charges	72	19
	£2,318	10
Credits	120	0
	£2,198	10

DETAILS OF SUMMARY.

	£	s.	d.	£	s.
Foods—					
1,073 weeks at cost of 15/- per week	804	5	0		
406 weeks at cost of 10/2 per week	206	7	8		
456 weeks at cost of 8/- per week	182	8	0		
				1,193	0
Depreciation and Loss on Cows—					
For details, *see* summer costs a/c				347	0
Labour—					
Head cowman, 38/- × 30 weeks	57	0	0		
Milking machine operator, 39/- × 30 weeks	58	10	0		
Milker, 37/- × 30 weeks	55	10	0		
Milker, half time, 37/- × 15 weeks	27	15	0		
Girl, 20/- × 30 weeks	30	0	0		
Cost of running milking machine, 32/- × 30 weeks	48	0	0		
				276	15
Depreciation, Implements and Machinery—					
10 % on £600 for 7 months @ £5				35	0
Repairs—					
(*a*) Machinery	16	5	0		
(*b*) Implements	17	10	0		
				33	15
Keep of Bull—					
1 only for winter period (the 2nd being with heifers) @ 15/- per week, *i.e.*, 15/- × 30				22	10
Proportion Rent on Buildings—					
(*a*) Rent, £1 per month × 7	7	0	0		
(*b*) Rates, 5/4 in £	1	17	4		
				8	17
General Expenses—					
Proportion fire insurance	4	4	0		
Workmen's Compensation	2	0	0		
National Health Insurance	2	7	6		
Veterinary a/c—drinks, oils, etc.	4	0	0		
Whitewashing sheds and mixing houses	2	0	0		
Coal, 2 cwt. per month, *i.e.*, 4/- × 7	1	8	0		
Soap, soda, cloths, brushes, etc.	2	10	0		
Milk Recording Society, 4*d.* per cow per month	8	3	4		
Weekly weigher's remuneration, 5/- per week	7	10	0		
Part upkeep bye-roads, mud scraped, gravel, etc.	7	0	0		
Stationery, a/c books, billheads, stamps, etc.		15	0		
Management charges, at £6 per week	180	0	0		
Interest on capital, at 5 %	106	15	0		
				328	12
Delivery Charges, as per summer a/c, proportion				72	19
Total Gross Cost				£2,318	10
Deduct Credits—					
36 live calves @ £2	72	0	0		
Manurial value of cakes, feed, etc.	48	0	0		
				120	0
Net cost of producing 13,750 gls. of milk				£2,198	10

Cost per gallon therefore 38·47 pence.

(NOTE.—A further credit of 1½*d.* per gal. should probably be made for manure, making the net cost about 37*d.* per gal.—J. W.

Farm No. 6—*continued.*

MILK PRODUCTION FOR WINTER PERIOD FROM OCTOBER 1st, 1918, TO JUNE 1st, 1919.

Prices charged against the foods used are as follows:—

	£	s.	d.
Mangolds—£1 per ton plus 5s for hauling to barn and pulping	1	5	0
Straw—45s. per ton plus 15s. for chaffing	3	0	0
Hay—£7 10s. plus charge for trussing and hauling 10s.	8	0	0
Dried Grains—The actual cost price plus haulage ...	17	0	0
Linseed Cake—The actual cost price plus haulage...	20	0	0

The Rations fed were three, as follows, each being for one week's feed.

A. Full Ration (fed to all cows giving one gallon or over per day).

	s.	d.
Roots—40 lbs. × 7—280 lbs.—2½ cwt @ 1s. 3d. ...	3	1½
Straw chaff—16 lbs. × 7—112 lbs.—1 cwt. @ 3s.	3	0
Hay 6 lbs. × 7—42 lbs.—3 stone at 1s.	3	0
Grains—2 lbs. × 7—14 lbs.—1 stone at 2s. 1½d. ...	2	1½
Linseed cake—3 lbs. × 7—21 lbs.—1½ stone @ 2s. 6d.	3	9
Total value for one week	15	0

B. Reduced ration (fed to cows giving less than one gallon per day).

	s.	d.
Roots—as for ration A	3	1½
Straw chaff—as for ration A	3	0
Hay—as for ration A	3	0
Grains—1 lb. per day × 7—7 lbs.—1 stone ...	1	1
Total value for one week	10	2½

C. Maintenance Ration (fed to dry cows).

	s.	d.
Hay—12 lbs. per day × 7—84 lbs.—3s. 4d. cwt.	6	0
Pasture feeding (or straw equivalent) say	2	0
Total value for one week	8	0

NOTE.—Some of the cows were being fattened out at the same time they were giving milk and to allow for this a fair proportion of weeks have been eliminated.

THUS:—

70 cows × 30 weeks gives total feeding weeks of ...		2,100
A Ration was fed for	1,073 weeks	
B Ration was fed for	406 weeks	
C Ration was fed for	456 weeks	
Weeks eliminated	165 weeks	
		2,100

MILK RECORDS.

30 weeks.

	Name of Cow.	Yield in lbs.	Weeks on A. ration.	Weeks on B. ration.	Weeks on C. ration.	Weeks eliminated.
1.	Dairymaid 1st ...	2750¼	30	—	—	—
2.	Princess 14th ...	1750¼	21	—	9	—
3.	Strawberry 2nd ...	929¼	4	—	—	26
4.	Dairymaid 2nd ...	486¼	4	—	—	26
5.	Topnote 6th	698	3	11	16	—
6	Favourite 5th ...	2102¾	30	—	—	—
7.	Lily 1st	4267½	30	—	—	—
8.	Sunbeam	665	4	9	17	—
9.	Favour	1232	9	5	16	—
10.	Dairymaid 5th ...	477¼	3	5	18	—
11.	Fidget 6th	1326½	9	3	18	—
12.	Polly 5th	1751¾	19	4	7	—
13.	Polly 2nd	1261¼	6	23	1	—
14.	Brindle 6th	2913½	30	—	—	—
15.	Bluebell 3rd	3127¼	24	5	1	—
16.	Princess 18th ...	2338	11	19	—	—
17.	Milkmaid 2nd ...	2752¾	30	—	—	—
18.	Pretty 8th	2114	11	13	6	—
19.	Betsy	3384½	27	3	—	—
20.	Polly 6th	2815¾	13	4	13	—
21.	Stag 8th	4144¾	30	—	—	—
22.	Rosebud	1629¼	10	13	7	—
23.	Polyanthus	3542	24	—	6	—
24.	Lassie	1067½	7	—	23	—
25.	Darling 2nd	3091½	30	—	—	—
26.	Tinker 6th	1204¼	9	4	17	—
27.	Daffodil 2nd	1712½	9	12	9	—
28.	Flossie 2nd	3143	23	6	1	—
29.	Bessie	2327½	12	9	9	—
30.	Buttercup 7th ...	824¼	3	4	—	23
31.	Strawberry 3rd ...	3281	30	—	—	—
32.	Mary	533¾	3	4	—	23
33.	Princess 17th ...	1382½	13	6	11	—
34.	Quiet 7th	470¾	3	6	21	—
35.	Red Rose 4th ...	1064	3	17	10	—
36.	Favourite 6th ...	1586	5	25	—	—
37.	Favourite 4th ...	1121¾	7	7	16	—
38.	Flower 2nd	530½	3	3	—	24
39.	Lily 2nd	1629¼	11	10	9	—
40.	Favourite 3rd ...	2593½	14	9	7	—
41.	Dairymaid 8th ...	1375½	11	3	16	—
42.	Dairymaid 6th ...	2641¼	20	5	3	—
43.	Jewel	2019½	9	6	15	—
44.	Hyacinth	1352¾	11	5	14	—
45.	Topnote 8th	1316¾	7	10	13	—
46.	Bluebell 4th	935¾	6	11	13	—
47.	Nancy 7th	1936	10	7	13	—
48.	May	2122¾	11	19	—	—
49.	Red Rose 5th ...	2637	30	—	—	—
50.	Bluebell 6th	2796¾	30	—	—	—
51.	Bluebell 5th	3024	30	—	—	—
52.	Buttercup 10th ...	2515	30	—	—	—
53.	Pansy 5th	1188¼	8	—	—	22
54.	Lucy 5th	1697½	16	3	—	11
55.	June	2303¾	30	—	—	—
56.	Dairymaid 9th ...	2952¾	30	—	—	—
57.	Nancy 8th	3088¼	30	—	—	—
58.	Brindle 7th	2539½	24	6	—	—
60.	White Heather ...	1839¼	9	21	—	—
61.	Pretty 14th	2086	14	12	4	—
62.	Forest Fairy	2352	24	6	—	—
63.	Pansy 4th	1799	4	26	—	—
64.	Topnote 9th	2014½	16	10	4	—
65.	Damsel 4th	1419¼	13	5	12	—
66.	Marvel	2968	22	—	8	—
67.	Lucy 6th	1474¾	12	8	—	10
68.	Pretty 13th	392½	6	—	24	—
69.	Milkmaid	3531½	24	—	6	—
59.	Brighteye	2544½	17	—	13	—
70.	Ivyleaf 3rd	269½	2	—	28	—
		137,157	1,073	406	456	165

NOTE.—20 of the above are heifers; 15 have had two calves.

The total yield from 70 cows for the 30 weeks was 13,715 gallons.

(NOTE.—In the above calculations a gallon of milk has been taken as 10 lbs. Taking the gallon of milk at 10¼ lbs. the actual production was 18,429 gallons in summer and 13,381 gallons in winter—a net difference of 795 gallons.—J. W.

Farm No. 6—*continued.*

HORSE LABOUR No. 3.

COST OF KEEPING HORSE PER WEEK, WINTER (1918).

NOTE.—This Statement is based upon actual records of cost of keeping 8–9 horses.

	Per week. £ s. d.	Per week. £ s. d.
Ration. Oats 2 bus. @ 46*s.* per qr. ...	11 6	
Hay 2 trusses (1 cwt.) @ £7 15*s.* per ton	7 9	
Chaff 56 lbs. @ 3*s.* per cwt. (incl. cost of chaffing)	2 0	
Mangolds 56 lbs. @ 2*s.* per cwt. ...	1 0	1 2 3
Litter. 2 trusses of straw per week (incl. tying) at 1*s.* 6*d.*	3 0	3 0
Veterinary attendance, drinks, etc., @ 10*s.* per horse per year or say per week...	2	
Condition powders, blood salts, leg washes, etc.	3	5
Upkeep of Stable. Floors, partitions, racks, bins, etc. @ 10*s.* per horse per year or say per week	2	
Stable Utensils. Barrow (one-third value) £1, 2 prongs 9*s.*, 2 brooms 7*s.*, brushes, combs, etc., 20*s.*, chaff basket (one-half life) 10*s.*, sacks and chaff bags 20*s.* Total 86*s.* per 8–9 horses or say 10*s.* 9*d.* per horse per year or per week	2½	4½
Harness. Repairs as per a/cs. 20*s.* per horse per year say	5	
New Harness @ 20*s.* per horse per year	5	
Polishes, oil, sand paper and incidentals	1	11
Shoeing. Cost £2 3*s.* 6*d.* per horse per year or per week	10½	10½
Insurance. Say 7*s.* 6*d.* per horse (£100 value) or per week	1½	1½
Depreciation on Horse Each horse given a working life of 10 years on a value of £100, *i.e.*, dep'tn. is £10 per horse per year or per week say	4 0	4 0
Interest on Value of horse @ 5 % *i.e.*, £5 per annum	2 0	2 0
Management. 5 % on capital, *i.e.*, £5, say	2 0	2 0
		£1 15 11½
Deduct for manure		2 11½
Total cost per week		£1 13 0

SUMMER PERIOD.

Ration.	£ s. d.	£ s. d.
Oats 1 bus. say	8 7½	
Hay 1 truss @ £7 15*s.* per ton... ...	3 10½	
Chaff 56 lbs.	2 0	14 6
Grazing @ per week	3 0	3 0
Other items as enumerated above (except litter)	10 8	10 8
		£1 8 2
Deduct for manure		2
		£1 8 0

36 weeks at winter feeding *i.e.*,	£1 13 0 =	£59	8	0
16 „ summer „	1 8 0 =	22	8	0
		£81	16	0
or per week		£1	11	6

Cost per working day of 5 days per week 6*s.* 3*d.*

NOTE.—Rent and Rates of Stables have not been charged.

POTATOES No. 2.

COST OF GROWING AN ACRE OF POTATOES IN 1918.

NOTE.—This Statement is based on actual records of costs.

	£ s. d.	£ s. d.
Seed. Grower's price per ton	7 0 0	
Dealer's profit	15 0	
Railway carriage...	1 18 0	
Cartage from station home ... ... (2 horses 10*s.*, man 5*s.*, will haul 4 tons per day).	3 9	
Hire of bags	5 0	
Storage room for 2 months	1 0	
Sorting over before planting	2 0	
Loss of weight and rejecteds (2 cwt. in each ton)	14 0	
Loss of bags by damage and rot ...	5 0	
Loading and hauling to field and distributing	5 0	
Return carriage on bags	2 0	
Total cost of 1 ton of seed ...	11 8 9	

POTATOES No. 2—*continued.*	£ s. d.	£ s. d.
Seed required to plant 1 acre, 16 cwt. @ 11*s.* 6*d.*		9 4
Manures. 2 cwt. S/Amm. @ £16 5*s.* per ton	1 12 6	
3 cwt. bone phos. @ £12 5*s.*	1 16 0	
4 cwt. Extermerite @ £3	12 0	
Hauling S/Amm. from station per ton 3*s.* 9*d.* or per acre	4½	
Hauling Bone phos. from station @ 6½d. per ton, Extermerite 9*d.*	1 3½	
Powdering manures in spring @ 3*s.* 4*d.* per ton	8	
Distributing artificial manure per acre (horse 10*s.*, man 5*s.*, do 3 acres per day)	3 4	
15 tons farmyard manure @ 7*s.* 6*d.* per load	7 10 0	
Hauling the same to fields @ 1*s.* 2*d.* per load...	1 5 0	
Spreading the same @ 10*s.* per acre ...	10 0	13 11
Cultivations. (NOTE.—Horses are put at 5*s.* and men at 5*s.* per day.)		
a. 1 plough (2 horses 10*s.*, 1 man 5*s.*, ¾ acre)	18 9	
b. 1 plough with 3 horses to cover manure	1 1 10	
c. Cultivating twice (4 horses, 2 men, for 6 acres)	9 8	
d. Dragging twice (4 horses, 2 men, for 8 acres)	7 3	
e. Dragging twice (2 horses, 1 man, for 10 acres)	3 0	
f. Ridging (2 horses, 1 man, for 2 acres)	7 6	
g. Planting (piece-work 7*s.* 6*d.* Note price in 1919, 11*s.* 6*d.*)	7 6	
h. Splitting ridges as *f*	7 6	
i. Dragging twice as *d*	7 3	
j. Dragging twice as *e*	3 0	
k. Dragging as potatoes coming through (3 horses)	2 6	
l. Dragging as *e*	3 0	
m. Horse hoeing (man, horse and boy do 3 acres)	4 4	
n. Horse hoeing or grubber	4 4	
o. Hand hoeing per acre	1 0 0	
p. Earthing up as *f*	7 6	6 14
Harvesting. Digging crop of say 6 tons @ 12*s.* 6*d.* per ton	3 15 0	
Hauling to pits @ 1*s.* 3*d.* per ton ...	7 6	
Heaping at pit (man 5*s.*, heaps 10 tons)	3 0	
1. Straw (allow 3 yards pit to 1 ton potatoes, so yards per acre to be covered are 18 × 2, 4 yards of pit to 1 truss straw or 9 trusses per acre @ 1*s.* 6*d.* (including cost of tying)...	13 6	
2. Earthing up pits, man 5*s.*, does 22 yards per day	4 2	
3. Thatching or covering with haulm or manure	3 0	5 6
Marketing.		
Opening pits and riddling out @ 4*s.* per ton	1 4 0	
Loading at pits @ 3*d.* per ton	1 6	
Cartage to railway @ 3*s.* 9*d.* per ton ...	1 2 6	
Repitting seed, say one-fifth, £1 2*s.* 3*d.*	4 0	2 12
Other Costs.		
Rent	1 0 0	
Rates	2 8	
Insurance @ 7*s.* 6*d.* per £100 say ...	3 6	
Hedge trimming round fields (50 chain @ 9*d.* for 27 acres) or per acre ...	1 4	
Supervising weights, labels, string, a/cs., etc.	2 6	
Loss by bags, buckets, baskets, etc. ...	5 0	
Proportion bye road maintenance, etc.	3 0	
Casting, repairs, etc.	10 0	
Broken time*—15 % on labour costs (£16)	2 8 0	
Interest on Capital of £17 per acre at 5 %	17 0	
Management charges at 5 %	17 0	6 10
		£43 18
Deduct unexhausted value of manures ...	2 5 0	
Value of cultivations for next crop ...	1 10 0	
		3 15
Cost of Growing		£40 3

Average crop per acre—6 tons seed and ware.

* If horse labour had been charged @ 6*s.* 3*d.* per working d instead of @ 5*s.* per day, the labour costs would have been increas by £1 15*s.* per acre (from £7 to £8 15*s.* per acre).

FARM No. 7.

County, ESSEX.

MILK No. 2.

Size of Farms: (Five) 1,210 acres. Arable: 947 acres; pasture: 263 acres. Soils: various.

System of Farming. Corn and potato growing and milk production.

System of Dairy Farming. The milking herd of 65 cows is kept on one farm of 375 acres, including 80 acres grass. The aim is to maintain a uniform supply of milk all the year round, and cows are brought in as required. All dry cows are sent to another farm and valued out of and into the milking herd at market prices. All cows are calved before coming to this farm. The number of milk cows is large relative to the acreage of grass.

NOTE.—The following statements are largely based upon actual records.

COST OF PRODUCTION PER GALLON DURING 1918–19.

NATURE OF EXPENDITURE.	PERIOD. 1st May to 30th Sept., 1918. Details.	Totals.	1st Oct. to 31st Jan., 1919. Details.	Totals.	1st Feb., 1919, to 30th Apl., 1919. Details.	Totals.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Food. Purchased cakes and meals ...	297 14 6	—	128 14 0	—	95 2 5	—
Home grown grain	78 15 0	—	374 10 0	—	303 14 3	—
Hay and Straw	—	—	326 14 0	—	239 11 2	—
Green Forage (maize, rape) ...	81 0 0	—	—	—	—	—
Roots	—	—	249 15 7	—	252 9 0	—
Pasture and aftermath (see app. (1)*	264 13 1	722 2 7	66 3 3	1,145 16 10	—	890 16 10
Labour. Per records	—	188 1 7	—	219 18 6	—	167 3 3
Depreciation and loss on cows (see app. 2)†	—	262 12 6	—	285 15 0	—	184 5 0
General Expenses.						
Rent and rates	28 5 3	—	22 9 10	—	16 17 6	—
Use of Machinery and Utensils ...	8 0 9	—	6 7 9	—	5 2 6	—
Water by meter	5 3 6	—	5 10 0	—	4 12 6	—
Veterinary attendance and medicines	7 17 6	—	6 14 0	—	5 19 6	—
Limewashing	15 0	—	15 0	—	15 0	—
Coal	4 6 9	—	3 16 0	—	2 18 0	—
Soap and soda	1 11 6	—	1 6 10	—	19 6	—
Milk recording	3 10 10	—	2 16 8	—	2 4 0	—
Milking overalls, caps, and towels...	2 11 9	—	1 19 8	—	1 14 6	—
Keep of bulls	36 15 0	—	29 13 6	—	22 2 6	—
		98 17 10		81 9 3		63 5 6
Transport to station	—	33 0 0	—	27 0 0	—	20 13 0
Interest on capital	—	61 12 1	—	47 17 8	—	35 19 0
Management	—	44 0 0	—	34 0 0	—	26 0 0
GROSS TOTAL ...	—	1,410 6 7	—	1,841 17 3	—	1,388 2 7
No Calves.						

	Gals.	Gals.	Gals.
Total Yield for Period	21,123	13,879	9,904¼
Average Value of Cows	£40	£40	£40
Gross Cost per gal.	1/4·02	2/7·85	2/9·64
Deduct Manurial Value	—	2½*d.*	2½*d.*
Net Cost per gal.	1/4·02	2/5·35	2/7·14

During the second and third periods, the average ration per head per day was found to be :—

Roots. 56 lbs @ 25*s.* per ton, estimated cost.
Linseed Cake. 1 lb. @ purchase price.
Cotton Cake. 1 lb. @ " "
Oats and barley meal. 6 lbs. @ market value less cost of marketing.
Hay. 6 lbs. @ £7 15*s.* per ton. Commencing 1st December, 1918.
Chaffed Hay and Straw. 12 lbs. @ £6 per ton.

* App. (1).

During the summer, the cows were on pasture, getting an average per head per day of 2 lbs. cake and 2 lbs. dairy meal. During July, August and September, chaffed maize and marrow stemmed kale were fed and charged at estimated cost per acre. The charge for pasture and aftermath was reckoned thus :

PASTURE.	£ s. d.
Rent and Rates on 48 acres, very good pasture @ £3 16*s.* 0*d.*	182 8 0
Accommodation pasture	100 0 0
Slag every 4 years, 12 acres per summer, 8 cwts. per acre @ 88*s.* 11*d.* per ton (31%) plus cartage	22 3 7
Drilling and use of drill (1*s.* per acre)	1 16 9
Rolling and harrowing @ 1*s.* 6*d.* per acre each	7 4 0
Fencing and ditching £6 17*s.* 6*d.* Materials £2 17*s.* 0*d.*	9 14 0
	£323 6 4
AFTERMATH.—15 acres aftermath @ 10*s.* per acre	7 10 0
	£330 16 4

† App. (2).

Depreciation and Losses were calculated thus :

	£ s. d.	£ s. d.	£ s. d.
1st Period.			
22 cows brought in		1,083 0 0	
20 sent out	793 0 0		
1 died	3 0 0		
1 waster	24 7 6		
		820 7 6	
			262 12 6
2nd Period.			
27 cows brought in		1,328 0 0	
26 sent out	1,017 0 0		
1 waster	25 5 0		
		1,042 5 0	
			285 15 0
3rd Period.			
16 cows brought in		763 5 0	
15 cows, out, and 1 died		579 0 0	
			184 5 0

NOTE.—The above method of figuring depreciation and loss on cows is the one which has been used in a business way for years in order to determine accurately the profits and losses on the various farms.

Farm No. 7—*continued.*

COST OF FARM OPERATIONS, 1918.

HORSE CULTIVATIONS.

NOTE.—This statement is based very largely upon actual records.

Cost of keeping One horse for a year.

August to June, 304 days.

Daily Ration.	Total.		£ s. d.
16 lbs. Oats ...	14 qrs. 160 lbs.	@ 50/- per qr.	£36 3 10
16 „ Hay ...	2 tons 384 lbs.	„ £7 15s. ton.	16 17 0
8 „ Straw Chaff	21 cwts. 80 lbs.	„ 2/- per cwt.	2 3 6
16 „ Mangolds or Swedes	2 tons 384 lbs.	@ 30/- per ton	3 5 2

June and July 61 days.

Daily Ration.	Total.		
12 lbs. Oats ..	2 qrs. 60 lbs.	@ 50/- per qr.	5 9 0
6 „ Chaff ...	3 cwts.	„ 5/- per cwt.	15 0
Grass ...	61 days	„ 1/- per day	3 1 0
Cost of Food for year			£67 14 6
Interest on investment @ 5% on £110			5 10 0
Depreciation and Veterinary Surgeon's fees, 10% ...			11 0 0
Insurance of horse and harness at 3/- %			3 9
Harness, Depreciation and wear and tear, 10% on £16			1 12 0
Shoeing, 6 times at 7/-			2 2 0
Cost of a year's maintenance of one horse ...			£88 2 3
Cost of a pair of horses for a year			176 4 6
Wages for Horseman, etc., for year :			
1 man @ 32/- per week, plus 3/- house and average of 3/- per week overtime for looking after horses on Sunday, etc.			98 16 0
National Health Insurance, 3d. per week ...			13 0
Workmen's Compensation Insurance @ 15/- %			14 9
			£276 8 3
Number of Working Days in a year (365—52)...		313	
„ Idle days (Bank Holidays and wet days)		23	
„ Actual Working days		290	
Cost of Implements, etc. :			
Under this heading must be included interest on capital invested in implements, wear and tear, depreciation and replacements. Taking a plough as representing the average* :			
New points and shares ... 1/- per day			
Interest and Repairs say ... ... 3d. „			
290 working days @ 1/3 ...			18 2 6
			£294 10 9

* The plough has been taken as an average. When other implements, such as seed drills, etc. are used the wear and tear and depreciation will be greater, and for harrows, etc., it is slightly less.

Total cost of horse cultivations (including man, horses and implements, is £294 10s. 9d. for a year of 290 working days, or just over £1 per day.

NOTE.—It is estimated that in 1919 the cost of a 2-horse team will amount to at least 25/- per day—calculated on the above basis.

WHEAT.—No. 6.

No. of Acres : 300—350 acres per year.

COST OF PRODUCTION PER ACRE OF 1918 CROP.

Soil : Heavy.

NOTE.—This statement is based very largely upon actual records of work done.

COST OF A MAN AND TWO HORSES TAKEN AT £1 PER DAY.

	£ s. d.	£ s. d.
Rent and Rates		1 12 6
Proportion of cost of bare following once in 3 years		1 0 0
Manure—		
Artificial, 3 cwts. Supers at 6/9 ; 1 cwt. Sulp./Amm. at 16/6 ; including sowing		1 16 9
Farmyard. Proportion dung and labour once in five years		2 0 0
Seed		1 3 6
Cultivations—		
Ploughing, including Shares	1 6 8	
Harrowing, heavy	2 8	
Two „ light	4 0	
Drilling : 3 horses, 3 men	4 0	
Rolling	2 0	
Carried Forward	1 19 4	7 12 9
Brought Forward	1 19 4	7 12 9
Water furrowing	1 6	
Rolling and harrowing in Spring ...	4 0	
Hoeing and chopping	10 0	
		2 14 10
Harvesting—		
Manual work per contract	17 0	
Binder twine and oil	6 0	
Use of horses	11 0	
Thatching, 2/- ; Straw, etc., 4/- ...	6 0	
		2 0 0
Threshing		1 3 6
Carting to Station (5 miles), 10 to 12 quarters per load		6 6
General Expenses : Hedging, ditching, etc., 11/- ; Fire insurance, 1/6		11 0
Depreciation on Implements (Repairs already included)		2
Interest on Capital		12
Management		10
Broken Time		3
Total cost		£15 16

Average Crop : 38 bush. Grain
34 cwts. Straw.

POTATOES. No. 3.

No. of Acres : 50 to 60 per annum on medium soil.

COST OF PRODUCTION PER ACRE OF 1918 CROP.

NOTE.—This statement is based very largely upon actual records of work done.

	£ s. d.	£ s. d.
Rent and Rates		1 15 0
Manure—		
18 tons dung @ 10/- per ton applied ...	9 0 0	
6 cwt. meat and bone meal @ 20/- cwt.	6 0 0	
	15 0 0	
Charge ⅓rds	10 0 0	
1 cwt. sulp/amm. @ 19/- per cwt. ...	19 0	
		10 19 0
Seed. 15 cwts. Scotch seed		7 10 0
Cultivations—		
Two steam cultivations	1 0 0	
Coal, 3 cwt. per acre @ 2/-	6 0	
Water cart, man and 2 horses cart water for 10 acres	2 0	
Two drag harrowings	6 0	
Baulking, one acre per day	1 0 0	
First splitting 1½ acre per day... ...	15 0	
Second „ „ „	15 0	
Planting, 1 man half acre per day ...	11 0	
Cartage to field	5 0	
Covering Seed, 1½ acres per day ...	15 0	
First Harrowing down	2 0	
„ Horse hoeing, 3 acres per day ...	7 0	
„ Moulding up	7 0	
Second harrowing down	2 0	
Hand hoeing	10 0	
Second horse hoeing	7 0	
„ moulding up	7 0	
		7 17 0
Spraying : 2 Dry Sprayings @ 11/- for material and 2/- for labour		1 6 0
Harvesting : 7 ton crop—		
Ploughing out, 2 acres per day ...	10 0	
Gathering, 6/8 per ton	2 6 8	
Carting to Clamp, 2 horses and 3 men cart 2 acres per day	16 6	
1 Man at clamp...	3 0	
1 „ strawing and thatching... ...	3 0	
½ Load straw	7 6	
Earthing up, 3 yards per ton	6 6	
		4 13 1
Marketing—		
Dressing and putting into bags 5/- per ton	1 15 0	
Carting to station, 2 journeys per day	1 15 0	
		3 10 0
General Expenses : Hedging, ditching, insurance, etc.		11 0
Use of Implements and Baskets		1 0 0
Broken Time		5 0
Interest on Capital, 5% on outlay for 6 months		1 0 0
Management		1 0 0
		41 6 2
Deduct proportion of cleaning costs		1 0 0
Net Cost...		£40 6 2

Average Crops : 7 tons Seed and Ware.

NOTE.—This farmer is a large potato dealer and the general conditions are very favourable to economical production per ton.

J.W.

FARM No. 8.

County, OXFORD.

Size of Farm : 400 acres arable, 300 acres pasture. Soil : Light stonebrash.

System of Farming : Cropping on five course and sheep feeding for manure.

STATEMENT OF COSTS OF PRODUCTION THROUGH A FIVE COURSE ROTATION, 1919 CROPS.

(Horse labour @ 6/- per day ; Man labour at average of 6/- per day. Costs based upon average yields.)

ROOTS No. 4.

First Course. Roots fed off by Sheep.

	£ s. d.	£ s. d.
Rent and Rates		1 1 0
Manure—		
Labour costs only		16 0
(Manure balanced by straw.)		
4 cwts. supers applied		1 12 0
Seed, 2lbs. @ 2/6		5 0
Cultivations—		
2 ploughings, 2 horses, ½ acre per day	3 12 0	
2 drags, man, boy, 4 horses, 6 acres per day	12 0	
2 harrows, 2 horses, 9 acres per day ...	4 0	
2 rolls, 2 horses, 9 acres per day ...	4 0	
Drilling	6 0	
Twice hand hoeing	1 7 0	
Three horse hoeings	12 0	
		6 17 0
Hedges, ditches, and general expenses ...		5 0
Use of Implements and Machinery ...		7 0
Interest on Capital, @ 5%		5 0
Management...		10 0
Total Cost		£11 18 0

Estimated yield, 1919 : 9 tons.
Average yield : 15 tons.

NOTE.—The custom of the district is to charge the sheep with £2 per acre, irrespective of size of crop, the sheep being charged with full cost of dry feeding. Farmers will let their turnips for nothing if the taker will plough the land once and feed the sheep with the usual quantity of concentrates. Sheep are regarded mainly as manure distributors. The total cost of the roots, less £2, is then divided over the next three crops—thus ¼ to barley, ¼ to seeds, and ½ to wheat.

BARLEY No. 5.

Second Course. Barley.

	£ s. d.	£ s. d.
Rent and Rates		1 1 0
Manure, none.		
Proportion of root crop costs		4 19 0
Seed, 3 bush. per acre, @ 9/-		1 7 0
Cultivations—		
Ploughing...	1 16 0	
2 harrows	4 0	
2 drags	12 0	
1 press	2 6	
Drill, 2 men, 1 boy, 4 horses, 8 acres per day	5 0	
Docking, etc.	1 0	
		3 0 6
Harvesting—		
Cutting, 1 man and boy, 3 horses, 8 acres per day	4 6	
Twine	3 6	
Opening round	1 0	
Shocking	1 6	
Carting and stacking	6 0	
Thatching...	2 0	
		18 6
Threshing		16 6
Carting to Station		4 6
General Expenses		5 0
Use of Implements and Machinery ...		10 0
Interest on Capital		6 6
Management...		14 0
Total Cost		£14 2 6

Estimated yield, 1919 : 16 bush. grain, 6 cwts. straw.
Average yield : 28 bush. grain, 10 cwts. straw.
(Straw put against manure.)

NOTE.—It is clear that the following makes up a large proportion of the cost of barley.

SEEDS HAY No. 3.

Third Course. Seeds Hay.

	£ s. d.
Rent and Rates	1 1 0
Proportion of cost of fallows	3 14 3
Seeds, 20 lbs. mixed seeds, @ 1/6...	1 10 0
Sowing and harrowing	5 0
Cutting, 7 acres per day	3 0
Turning, 14 acres per day...	1 0
Carrying, 8 men, 1 boy, 5 horses, 7 acres per day ...	13 0
Thatching	2 6
Use of Implements...	5 6
General Expenses	3 0
Interest on Capital...	3 0
Management...	10 0
	£8 11 3

Yield for 1919 : 12 cwts. per acre.
Average yield : 25 cwts. per acre.

WHEAT No. 7.

Fourth Course. Wheat.

	£ s. d.	£ s. d.
Rent and Rates		1 1 0
Manure, share of fallows		1 4 9
Seed, 3 bush., @ 10/-		1 10 0
Cultivations—		
Plough	1 16 0	
2 harrows	4 0	
2 drags	12 0	
Drill	5 0	
Harrow and roll in spring	4 0	
Weeding	1 6	
		3 2 6
Harvesting		19 6
Threshing		16 6
Carting to Station		4 0
Use of Implements and Machinery ...		10 0
General Expenses		5 0
Interest on Capital...		7 0
Management...		14 0
Total Cost		£10 14 3

Estimated yield, 1919 : 16 bush. grain, 9 cwts. straw.
Average yield : 24 bush. grain, 14 cwts. straw.

OATS No. 4.

Fifth Course. Winter Oats.

	£ s. d.	£ s. d.
Rent and Rates		1 1 0
Manure, 2 cwts. corn manure		1 8 0
Seed, 4 bush, @ 7/6...		1 10 0
Cultivations—		
Plough	1 16 0	
2 harrows	4 0	
2 drags	12 0	
Press	2 6	
Drill	5 0	
Harrow and roll in spring	4 0	
Weeding	1 6	
		3 5 0
Harvesting		19 6
Threshing		16 6
Carting to Station		4 6
Use of Implements and Machinery ...		10 0
General Expenses		5 0
Interest on Capital...		5 0
Management...		14 0
Total Cost		£10 18 6

Estimated yield, 1919 : 24 bush. grain, 7 cwts. straw.
Average yield : 32 bush. grain, 12 cwts. straw.

MUTTON No. 2.

COST OF SHEEP FEEDING, OCTOBER, 1918, TO MARCH, 1919.

	£ s. d.
60 Sheep consume 10 acres roots in 5 months (151 days). Allowance for root crop	20 0 0
60 Sheep eat 4 tons 1 cwt. cake, @ £20...	81 0 0
60 Sheep eat 4 tons 1 cwt. hay, @ £8	32 8 0
Labour for 21½ weeks, @ 22/-	34 10 0
Interest on Capital (£186)	4 10 0
Depreciation of Implements	4 10 0
Risk of Losses, @ 2½ %	4 10 0
Total	£181 8 0
60 Sheep, weighing 5 stone, bought in @ 62/-... ...	186 0 0
Cost of Feeding	181 8 0
	367 8 0
60 Sheep sold, in wool, 10¾ stone, @ 12/-	369 0 0
Profit	£1 12 0

FARM No. 9.

County, YORKS (E. RIDING).

Size of Farm : An average one of 300 acres all arable.

Statement of costs of production through a regular rotation—wheat, barley, turnips, oats and seeds, with sheep and cattle feeding on turnips, cake and straw. Typical wold land farming. Nothing sold except corn and meat. 1919 crops.

FIRST COURSE.

WHEAT No. 8.

	Cost per ac. £	s.	d.
Ploughing	1	8	2
Pressing		9	4
3 harrows		5	6
Rolling, 3 horses		2	2
Seed, 3 bush. @ 76/- per qr.	1	8	6
Farmyard manure, 10 loads at 6/3 per load	3	2	6
Manurial value of cake in same, 16¼ tons @ 48/- per ton (*see* cattle) £39		13	0
Carting and spreading manures	2	0	0
Harvesting, threshing and marketing	3	7	3
Looking—thistles, docks, &c.		8	0
Rent and rates	1	7	6
Establishment charges	1	4	8
Interest, 5 % on £16		16	0
Management		15	0
Total	£17	7	7

	s.	d.		
Deduct for farmyard manure	15	7		
„ „ M. V. of cake	3	0		
			18	7
Net Cost			£16	9	0

Average yield—4 qrs. per acre, 1 ton Straw.

SECOND COURSE.

BARLEY No. 6.

	Cost per ac. £	s.	d.
Brought forward from wheat		18	7
Ploughing 1st	1	8	2
„ 2nd	1	1	2
Dragging, 3 times		11	9
2 harrows		4	4
3 rolls		5	3
Looking		8	0
Seed, 3 bush @ 68/- per qr.	1	5	6
Drilling		2	8
Manures, 1 cwt. sulph./amm., 16/9 ; 2 cwt. salt, 5/- ; Mixing and sowing, 2/-	1	3	9
Harvesting, threshing and marketing	3	7	3
Rent and rates	1	7	6
Establishment charges	1	4	8
Interest on capital, 5% on £16		16	0
Management		15	0
Total Cost	£14	19	7

Average yield—4 qrs. Grain. 15 cwts. straw.

THIRD COURSE.

ROOTS No. 5.

	£	s.	d.	Cost per ac. £	s.	d.
Ploughing 1st 28/2, 2nd 21/2, 3rd 21/2				3	10	6
Dragging					15	8
6 rollings					10	6
Skimming					2	11
Drilling					4	10
Seed, 2 lb. @ 2/8					5	4
Manures, 8 cwts. slag at 3/6	1	8	0			
3 cwts. supers @ 5/-	1	1	0			
				2	9	0
3 scufflings					13	9
1 turnip harrow					1	6
Hoeing					15	0
Rent and rates				1	7	6
Establishment charges				1	4	8
Interest on capital, 5% on £16					16	0
Management					15	0
Total Cost				£13	12	2

	£	s.	d.
Charge to sheep	6	0	0
cattle	·3	0	0
oats	3	10	0
clover	1	2	2

NOTE.—Normally two-thirds fed off by sheep and one-third carted off for cattle.

Average crop—about 12 tons.

MUTTON No. 3.

50 acres turnips @ 8 tons per acre to be fed to sheep.
Feeding period average about 30 weeks.
Allowing 24 lbs. per head per day, about 160 required.

	£	s.	d.
Cost price of 160 sheep @ £3 apiece	480	0	0
50 acres turnips @ £6 per acre	300	0	0
1 man @ 47/- per week	70	10	0
½lb. cake per head per day on average at £20 per ton	75	0	0
Skins—8 died	3	0	0
Interest on £480 @ 5% for 7 months	14	0	0
Management	50	0	0
Total	£992	10	0
Deduct M. V. cake—75 cwts. @ 48/- per ton	9	0	0
Net Cost	£983	10	0

152 sheep @ average dead weight of 70 lbs. = 10,640 lbs. for £983 10*s.* = 1/10 per lb.

Less wool, 18/- per head. Net cost 1/7 per lb.

BEEF No. 2.

50 acres turnips @ 4 tons per acre fed to cattle.
Feeding period average about 26 weeks.
About 20 cattle required.

	£	s.	d.
Purchase price, 7½ cwts. @ £4 per cwt.	600	0	0
50 acres turnips @ £3 per acre	150	0	0
10lbs. per head per day of cake @ £20 per ton, 16¼ tons	325	0	0
1 man at 47/- per week, carting turnips, etc.	61	2	0
Horse ¼ time @ 2/6 per day	22	15	0
Straw, 160 acres @ £1 per acre (20 acres allowed to horses).	160	0	0
Interest on £600 @ 5% for 6 months	15	0	0
Management	25	0	0
Total	£1,358	17	0

	£	s.	d.		
Deduct M.V. of cake	£39	0	0		
„ Farmyard manure	160	0	0		
				199	0	0
				£1,159	17	0

Probable live weight when sold—10¾ cwt. each = 215 cwts. for £1,159 17*s.* = Cost per live cwt.—107/9.

NOTE.—£195 in all charged for farm manure against wheat, but £25 allowed for horses, etc.

FOURTH COURSE.

OATS No. 5.

	s.	d.	per acre. £	s.	d.
Brought forward from turnips			3	10	0
„ „ „ sheep				3	0
Ploughing			1	8	2
3 chisel harrows				11	9
4 rolls				7	0
Drilling				2	8
Seed, 4 bush. @ 50/- per qr.			1	5	0
½ cwt. sulp./amm.	8	4			
2 „ salt	5	0			
Mixing and sowing	2	0			
				15	4
Looking				8	0
Rent and rates			1	7	6
Harvesting, threshing and marketing			3	7	3
Establishment charges			1	4	8
Interest, 5% on £16				16	0
Management				15	0
Total Cost			£16	1	4

Average yield—5 qrs. per acre Grain, 1 ton per acre Straw.

FIFTH COURSE (grazed).

SEEDS No. 4.

	per acre. £	s.	d.
Brought forward from turnips	1	2	2
Seed	2	10	0
Sowing		4	0
Rent and rates	1	7	6
Looking		10	0
Establishment charges	1	4	8
Interest, 5% on £16		16	0
Management		15	0
Total	£8	9	4

Feeding value for sheep on average, £5 10*s.* (5 sheep per acre for 22 weeks @ 1/- per week).

Farm No. 9—*continued.*

EXPLANATORY NOTES ON ABOVE STATEMENT.

1919 CROP PRICES.

Cost of Man. Allow 4 productive days' work per week (Saturday half-holiday, holidays, broken time, remunerative work, &c.)
Average standard wage—44*s.* per week, i.*e.*, 11*s.* per day.

Cost of Horse. Food only charged here.

	£	*s.*	*d.*
39 weeks house feeding	43	13	1½
13 „ partly grass feeding	9	2	0
Food for year ...	£52	15	1½
Cost per working day, 4 days per week			5*s.* 1*d.*
Cost of man and 2 horses per working day		£1	1*s.* 2*d.*

NOTE.—It is estimated that on an average wold farm of about 300 acres, the increase labour costs in 1919–20 compared with 1918–19, is about £677 as follows :—

Wages increased on average by 11*s.* per week.

To get through work in shorter hours 1½ more men required.

„	„	„	„	„ 2 „ horses	„		
i.e. 10 men @ 11*s.* per week					286	0	0
1½ „ @ 47*s.* „					183	0	0
2 horses @ 10*s.* 2*d.* per day					208	0	0
					£677	0	0

AVERAGE AMOUNT OF WORK DONE PER DAY.

	Cost per ac. £	*s.*	*d.*
Ploughing, 1st time, ¾ of acre	1	8	2
„ 2nd „ 1 acre	1	1	2
Dragging, 4 horses, 1 man, estimated work 8 acres ...		3	11
Rolling, 2 horses, 1 man		1	9
„ 3 „ 1 „ 12 acres a day		2	2
Skimming, 3 horses, 1 man, 9 acres a day		2	11
Corn drilling, 2 horses, 2 men, 12 acres a day		2	8
Scuffling, 1 horse, 1 man, 3½ acres a day		4	7
Turnip harrowing, 1 horse, 1 man, 10½ acres a day ...		1	6
Hoeing turnips, 15*s.* per acre		15	0
Press drilling, ¼ of 1st time ploughing		9	4
Turnip drilling, 3 horses, 3 men, 10 acres a day ...		4	10
Harrowing, 3 horses, 1 man, 12 acres a day		2	2
Looking corn ... ... 8*s.* to 10*s.*			
Foldyard Manure. Leading, filling and spreading, 4*s.* per load for 10 loads	2	0	0

Threshing.

	£	*s.*	*d.*	
Threshing machine,	3	10	0	per day (incl. 2 men)
Coals		16	0	„ „
10 men	5	17	6	(incl. meals for above 2 men).
3 horses		15	3	
Total cost per day	£10	18	9	
10–11 acres per day				1 0 0

Harvesting.

Men £1 per working day, fixed wage.

Cutting, 4 horses, 2 men, estimate 10 acres per day		6	0
Twine (1 ball per acre, 20 balls 1 cwt.)		6	0
Stooking, gathering, raking, etc.		5	0
Horse raking, estimate 15 acres per day		1	8
Stacking, leading and forking, 9 men, 8 horses, estimate 10 to 11 acres per day	1	0	0
Thatching, raking and drawing straw, including thatching twine		3	6
Delivering, 12 horses, 4 men, half a day		5	3

ESTABLISHMENT CHARGES.

Blacksmith's account	90	0	0
Harness repairs and upkeep	20	0	0
Joiner's account, painting and repairs to carts, etc.	50	0	0
Fencing—wood and labour	25	0	0
Stable utensils	12	10	0
Depreciation on horses (10)	100	0	0
Insurance against fire	9	0	0
Workmen's compensation insurance	9	0	0
National health insurance	6	0	0
Upkeep of driving pony and trap—share	50	0	0
For 300 acres	£371	10	0
per acre ...	£1	4	8

Interest on capital—on a basis of £16 per acre capital @ 5% per annum.

Management. £300 allotted 15*s.* per acre, to land.
£50 to sheep, £25 to cattle.

FARM No. 10.

County, HANTS.

Size of farm: 553 acres arable. 83 acres pasture. 161 acres down.

SHEEP No. 3.

SHEEP ACCOUNT FOR 1918—1919.

Valuation of sheep stock at 29th September, 1918.

	£	*s.*	*d.*
296 ewes @ £4 17*s.* 11*d.*, 103 ewe tegs @ £4 8*s.* 6*d.*, 3 rams @ £6 5*s.*, and 78 wether tegs @ £4 2*s.* 6*d.* ...	2,245	12	6
Value of hurdles, etc.	129	16	0
Foods consumed 29th September, 1918, to 28th September, 1919—			
161 acres down land @ 7*s.* 3*d.* per acre (rent, rates, etc.)	58	7	3
132 acres roots @ £5 9*s.* 8½*d.* per acre ... ... (At one-half estimated cost of growing.)	724	1	6
47 acres catchcrops @ £6 12*s.* 2*d.* per acre ... ... (At full estimated cost of growing.)	310	7	10
58 acres aftermath @ £6 15*s.* per acre	391	10	0
76 tons hay @ £7 15*s.* per ton	589	0	0
34 tons straw @ 30*s.* per ton	51	0	0
58 tons 2 cwts. purchased cakes @ average of £17 16*s.* 8*d.* per ton	1,036	2	4
8 tons 7 cwts. oats @ 53*s.* per qr.	115	12	1½
Labour. Wages of head and under shepherd for 1 year	143	6	3
Proportionate wages of boy, horse and cart attending @ 34*s.* per week	88	8	0
Man tying out hay	25	14	7
Hurdles. Cost of proportion purchased for year ...	22	17	0
Purchases of ram lambs, etc. Three ram lambs @ £11 18*s.* 10*d*	35	16	6
One ram lamb @ £7 7*s.*...	7	7	0
General Expenses—			
Cost of dipping (twice) and dips	9	12	0
Ointments and other veterinary expenses	2	2	0
Share of unremunerative work, marketing, etc. ...	6	0	0
Cost of marketing sheep and wool	46	4	11
Interest.			
5% on valuation, £2,245 12*s.* 6*d.* + £129 16*s.* ...	118	15	3
5% on working capital	106	2	0
Management. Proportion of farmer's salary	266	13	4
Clipping	9	16	8
	£6,540	5	0½
Less manurial value cake and hay	178	19	2
Total ...	£6,361	5	10½

Credits. Sales of lambs and other sheep.	£	*s.*	*d.*
76 tegs and 13 ewes, average £5 18*s.* 9*d.* each	469	1	3
40 fat lambs, average £3 4*s.* 6*d.* each	129	0	0
107 fat tegs, £5 6*s.* 4*d.* each	568	17	8
60 draft ewes @ £5 4*s.* 6*d.* each	313	0	0
Sale of Wool, etc.			
1,957 lbs. @ 3*s.* 2*d.* per lb.	309	17	2
15 skins @ 4*s.* 9*d.* and 6 carcases sent to butcher at 26*s.* 5*d.*	11	9	9
Valuation at 28th September, 1919 (on same basis as at 29th September, 1918.)			
Flock, hurdles and accessories	2,289	18	6
Total ...	£4,091	4	4
Deficit ...	£2,270	1	6½
	£6,361	5	10½

FARM No. 11.

County. LANCASHIRE.
System of Farming. Mixed.

OATS No. 6.

COST OF GROWING 17 ACRES OF OATS. 1918.

	£	s.	d.
Rent @ £1 16s. 3d. per acre	30	5	0
Rates @ 4s. 1½d. per acre	3	10	1½
Artificials. 4 cwt. to the acre of a mixture of salt, sulphate of ammonia, bones, and super phosphate @ 6s. per cwt.	20	8	0
Seed 220/168 bags Scotch Abundance seed oats @ 38s.	41	16	0
Tillages.			
17 acres, consisting of 2 fields, 7½ and 9½ acres, 7½ barn field, after leys, 1 man and 2 horses ploughing, 1 day		14	8
1 man and 1 boy and 3 horses ploughing 11½ days; 1 man 8s., 1 boy 3s. 6d., 1 horse 3s. 4d., 11½ days	11	16	6
9½ acres, corner field, after green crop, 1 man and 2 horses, 1 day, harrowing and grubbing headland ready for ploughing, &c.		14	8
1 man and 2 horses ploughing 8 inches deep, 11 days @ 14s. 8d.	8	1	4
1 man and 2 horses harrowing once over before sowing, 2 days @ 14s. 8d.	1	9	4
2 men and 2 horses sowing 2½ days (1 man @ 8s., 1 man @ 5s. 6d., 2 horses @ 6s. 8d. = 20s. 2d. ...	2	10	5
1 man, 1 boy, and 2 horses harrowing and rolling after sowing, 2 days (1 man @ 5s. 6d., 1 boy @ 3s. 6d., 2 horses @ 6s. 8d. = 15s. 8d. per day)...	1	11	4
	£26	18	8
Harvesting.			
3 men and 1 boy cutting roads round and laid corn out, 4 days @ 22s. 6d....	4	10	0
3 men and 1 boy and 2 horses, 1 day @ 22s. 6d. and 6s. 8d.	1	9	2
5 men, 1 boy, and 2 horses, 2½ days (3 men and 1 boy @ 22s. 6d., 2 men @ 14s., 2 horses @ 6s. 8d. = 36s. 2d.)	5	7	11
4 men, 1 boy, and 2 horses, 4 days (3 men and 1 boy @ 22s. 6d., 1 man @ 22s. 6d., 1 man @ 7s., 2 horses @ 6s. 8d. = 36s. 2d.	7	4	8
3 men and 2 horses 4 days cutting laid corn with mowing machine (3 men @ 19s., 2 horses @ 6s. 8d. = 25s. 6d.)	5	2	0
Men's overtime during cutting, 8½ hours @ 2s. 3d. (3 men @ 9d. per hour per man)		18	4½
	£24	12	1½
Threshing.			
Hire of machine, 3½ days @ £5 15s. per day ...	19	5	0
Hire on extra men and own men	7	2	6
Extra feeding of men (estimated)	5	0	0
	£31	7	6
Marketing.			
Carting oats to station, 1 man and 2 horses, ½ day		7	4
2 men helping to load		2	0
Expenses over selling		10	0
		19	4
Use of machinery and depreciation, &c. @ 5s. per ac.	4	5	0
General expenses, including hedging, dock picking, stone picking, &c. (1 man and 1 boy picking, 2 days, 1 man and 1 horse carting away, ½ day, 3 men and 1 boy hedging and brushing, 2 days)	3	17	8
Proportion of cleaning and manuring carried forward from root crop on 9½ acres @ 30s. per acre ...	14	5	0
Interest on outlay	7	10	0
Allowance for management	17	0	0

Summary.

Rent	30	5	0
Rates	3	10	1½
Artificials	20	8	0
Seed	41	16	0
Tillages	26	18	3
Harvesting	24	12	1½
Threshing	31	7	6
Marketing		19	4
Depreciating and machinery	4	5	0
General expenses	3	17	8
" "	14	5	0
Interest on outlay	7	10	0
Allowance for management	17	0	0
	£226	14	0

Cost per acre £13 6s. 9d.

Medium loam. 7 acres very stiff loam.

Seed got in grand condition, March 14th. Good summer and an exceptionally good crop of oats. Very bad harvest for getting, weather continuing wet and rough until corn was mostly shed and very badly laid.

9½ acres after root crop, which was after corn crop, before corn being clover; 7½ acres after 2 years clover crop before corn.

Threshed 118 0/168 bags of oats; 64 bags badly sprt and weathered, sold 37 @ £1 per bag	£ 37	s. 0	d. 0
Used rest for cattle	27	0	0
54 bags made Government price, 24s. 6d.	66	3	0
	£130	3	0

Only about 4 tons of straw fit for sale.

WHEAT No. 9.

COST OF GROWING 4 ACRES OF WHEAT AFTER LEY (2 YEARS).

	£	s.	d.
Rent £1 16s. 3d. per acre @ £1 16s. 3d. per acre, 4 acres	7	5	0
Rates @ 4s. 1½d.		16	6
½ ton of agric. salt @ £2 per ton...	1	0	0
4 cwt. of sulphate of ammonia @ £16 per ton ...	3	4	0
6 ton 18 cwt. of lime	8	10	0
Seed.			
4 bags 11/16 lbs. of seed wheat @ 48s.	9	12	0
Tillages.			
Wheat grown after 2 years leys. Firstly skimmed, 3 or 4 inches, allowed to stand 6 weeks, then crossed ploughed, 10 inches to 11 inches deep. Applied lime and then sowed wheat. Salt and sulphate applied in spring.			
A/c. on tillages. Man and 2 horses skimming, 4½ days at 14s. 8d.	3	6	0
1 extra man to lead horse for headlands ½ day ...		2	9
Cultivated turf, 3 days, 1 man and 2 horses @ 14s. 8d.	2	4	0
Cross ploughing, 5 days, 1 man and 2 horses @ 14s. 8d.	3	13	4
1 extra man ½ day for headlands		2	9
Harrowing and sowing wheat, 1 man and 4 horses, 1 day @ 14s. 8d.		14	8
1 man and 2 horses @ 12s. 2d.		12	2
1 man following drill		5	6
1 man sowing and mixing sulphate and salt, 1 day		5	6
1 man and 2 horses harrowing (twice over), 1 day		11	4
1 man picking dock, 2 days		11	0
1 man and 1 horse rolling, ½ day		4	5
Carting and putting out on field truck of lime, 3 men and 3 horses, 1½ days, 1 man and 2 horses, 1½ days @ 14s. 8d.	1	2	0
1 man and 1 horse, 1½ days @ 8s. 10d.		13	3
1 man helping fill, &c.		8	3
2 men spreading lime 1 day		11	0
1 man and 1 horse harrowing in spring ½ day ...		7	4
1 man and 1 horse rolling in spring ½ day		6	1
1 man trimming hedges and trees round field 3 days		16	8
2 men and 1 horse @ 11s. 4d., carting brushings away, 1 day @ 5s. 6d....		16	10
	£17	14	10
Harvesting (men overtime.)			
Cost of cutting, 12 hours @ 9d.		9	0
3 men and 2 lads cutting round and cutting laid parts, 1½ days @ 22s. 6d.	1	13	9
1 horse in reaper, ½ @ 3s. 4d.		1	8
3 men and 1 lad cutting one way with binder and 2 horses, 1½ days, and setting up, men @ 22s. 6d.	1	13	9
Horses @ 3s. 4d.		10	0
4 men and 1 lad carting wheat to stackyard and stacking, 3 horses, 1 day, men @ 28s. 6d.	1	8	6
Horses @ 3s. 4d.		10	0
	£6	6	8
Threshing.			
Hire on machine for 1 day	5	15	0
Extra men with machine, 4 men 1s. per hour, 2s. extra	1	14	0
Own men	1	2	8
Food, &c.	1	10	0
	£10	1	8
Carting wheat to station, 1 man and 2 horses, ½ day...		14	8
Expenses over selling		10	0
Use on implements, machinery and general expenses, 5s. per acre	1	0	0
Interest on average outlay	3	10	0
Allowance for management	4	0	0

SUMMARY.

Rent	7	5	0
Rates		16	6
Manures, &c.	12	14	0
Seed	9	12	0
Tillages	17	14	10
Harvesting	6	6	8
Threshing	10	1	8
Marketing	1	4	8
General expenses	1	0	0
Interest on outlay	3	10	0
Management	4	0	0
	£74	5	4
Cost per acre	18	11	5
Deduction proportion liming costs	2	8	10
Net cost per acre	16	2	7

Soil consists of medium loam.
Seed got in, in perfect condition, good summer and crop everything that could be desired.
Very bad harvest, started cutting on August 21st and finished carting on October 16th.
All stooks badly spoilt, corn unfit for market.
Threshed 12 qtrs. of wheat or 3 qtrs. per acre.
Wheat realised (for hen corn) £35 0 0
Straw only fit for bedding.
Crop for two years previous was clover, before that corn after green crop.
P.S.—This cost does not include carting wheat seed from station to field.

FARM No. 12.

unty, OXFORD.

Size of Farm : 700 acres. Arable 416 acres. Pasture 284 acres.

Soil : Sandy loam.

System of Farming : Corn growing and Meat production.

ORSE LABOUR.—No. 4.

Average No. of Horses regularly at work : 10.

COST OF KEEPING EACH HORSE FOR YEAR 1918-19

	£ s. d.	£ s. d.
ods.		
2 bush. oats per week, all year @ 6s. per bush.	31 4 0	
10 lbs. hay per day, Nov. to May (30 weeks) @ 7s. 9d. per cwt ...	7 5 4	
Grazing from Nov. to May @ 1s. per wk.	1 6 0	
„ „ May to Oct. (26 wks.) @ 4s. per week	5 4 0	
		44 19 4
oes and Shoeing.		
6 new sets per ann. @ 8s. £2 8 0		
3 removals, &c. „ 3s. 9 0		
	2 17 0	
rness	1 5 0	
able Equipment	10 0	
able Rent, Rates	1 0 0	
terinary. Expenses and Medicine ...	1 0 0	
neral Expenses and supervision ...	10 0	
preciation. 5% on average value £125	6 5 0	
terest on Capital 5% on „ „ „	6 5 0	
		19 12 0
Total Cost		£64 11 4

No credit for manure. Horses out at nights all year round.
Average number of working days per annum... 255
Average cost per horse per working day ... 5s.

EF No. 3.

No. of Cattle to which costs refer : 8

Class of Cattle „ „ „ 2½ years old, S.H. bullocks.

Date of Purchase : 8th October, 1918.

Date of Sale : 7 on 15th July, 1 on 28th July, 1919

COST OF PRODUCTION OF 8 FAT CATTLE.

	£ s. d.	£ s. d.
rchase price		240 0 0
ods.		
a) 12 weeks, Oct. to Dec.		
Grass @ 1s. per week each	4 16 0	
Hay, 7lbs. per head per day, £7 15s. per ton	16 5 6	
b) 17 weeks, Jan. to April.		
Average daily ration per head :		
Straw chaff, 8lbs. 68 cwts. @ 1s. 6d.	5 2 0	
Hay, 8lbs. 68 „ @ 7s. 9d.	26 7 0	
Roots, 50lbs. 425 „ @ 1s. 6d.	31 17 6	
Cakes & meals, 4lbs. 34 cwts. @ 18s.	30 12 0	
c) 11 weeks, May to July.		
Grass @ 2s. 6d. per head per week ...	11 0 0	
Cakes, 4lbs. per head per day @ £18	19 16 0	
		145 16 0
bour.		
2 weeks, man @ 35s. per week, 2 hours daily	5 13 0	
7 weeks, man @ 35s. per week, 20 cattle full time	11 18 0	
1 weeks, man @ 40s. per week, 100 cattle full time...	1 15 0	
		19 6 0
t and Rates. Buildings rated @ £80 10s. charge...		4 0 0
Allow for 2 weeks extra for 1 bullock		14 0
neral Expenses		5 0 0
erest on capital, 5% on £240 for 9 months		9 0 0
5% on £180 for 6 months		4 10 0
nagement, say		5 0 0
Total Cost		£433 6 0

Manure made in yards put against litter.
„ „ on grass not charged against grass.

o Weight of Cattle sold, 98 cwts. and 2 lbs.

7 sold @ 80s. to 83s. per cwt. L.W. ; 1 @ 1s. 4d. per lb. D.W.)
Net cost per live cwt., 88s. 4d.

TE.—All the above cattle throve well, so that no allowance has been made for deaths or "screws."

COST OF PERMANENT GRASS PER ACRE.

	£ s. d.
Rent	2 0 0
Rates	5 0
Thistle cutting	5 0
Hedging	3 0
Ditching	2 6
General expenses	6
	£2 16 0
Allocated thus :	
11 weeks, May to July, @ 2s. 6d.	1 7 6
10 „ July to Sept., @ 1s. 4d.	13 4
13 „ Oct. to Dec., @ 10d.	10 10
18 „ Jan. to April, @ 3d.	4 6
	£2 16 2

ROOTS No. 6.

Previous crop : Oats.

AVERAGE COST PER ACRE OF 1919 CROP.

	£ s. d.	£ s. d.
Rent		1 4 0
Rates		5 0
Manure.		
12 loads per acre @ 10s., Filling, 5s.; Tipping, 2s.; Spreading, 3s.; Boy, 3s.; charge half		3 6 6
Seed. 3 lbs. @ 3s. 9d.		11 3
Cultivations.		
Ploughing 4 times with 2 horses ¾ acre per day	2 13 4	
Labour for same	1 11 0	
Dragging, 4 horses, 3 times, 7s. 6d, man and boy, 3s.	10 6	
Rolling twice, 2 horses 2s., man 7d. ...	2 7	
Three harrowings, 2 horses, 3s. man, 1s. 6d.	4 6	
Drilling, 2 horses 1s., man and boy, 1s.	2 0	
Horse-hoeing, twice, man and horse ...	3 6	
Hand-hoeing, once	15 0	
		6 2 5
Broken time...		3 0
Use of implements		7 0
General expenses, hedging, ditching, &c.		12 0
Interest on capital		6 0
Management		1 0 0
Total Cost		13 17 2

To be fed off on ground with sheep.

WHEAT No. 10.

Previous Crop : Oats.

No. of acres on which statement is based : 35.

AVERAGE COST PER ACRE OF 1919 CROP.

	£ s. d.	£ s. d.
Rent		1 4 0
Rates		5 0
Manure.		
12 loads per acre at 10s. per ton. Labour : filling 5s., tipping 2s., spreading 3s., boy driving 2s. 6d. Charge half		3 6 3
Seed. 2½ bushels @ 90s. per qr. ...		1 5 4
Cultivation.		
Ploughing, 2 horses, 3 roods per day ...	13 4	
Man for same	8 0	
Dragging, horses 2s. 6d., man and boy 1s.	3 6	
Drilling, 2s., 2 men and boy 1s. 6d. ...	3 6	
Two harrowings 3s., twice in Spring 3s.	6 0	
Rolling	3 0	
Weeding 3s., hedging and ditching 4s. 6d.	7 6	
		2 4 10
Harvesting.		
Binding 1s. 6d., string, 6s., man 1s., stacking 2s.	10 6	
Carting and stacking	9 6	
Thatching 2s. 6d., straw, &c.. 5s. ...	7 6	
		1 7 6
Threshing		1 4 6
Carting to station, 4 miles...		4 0
Broken time...		3 0
General expenses		7 6
Use of implements		7 0
Interest on outlay		9 0
Management		1 0 0
		£13 7 11

Average yield per acre : 24 bush. grain, 15 cwts. straw } for 1919.
The 1918 crop would average 32 bush. grain, 30 cwts. straw } per acre.

FARM No. 13.

County. BERKS.

DISTRIBUTION OF RENTS AND RATES.

	Rent. £ s. d.	Rates. £ s. d.
Church Farm	360 0 0	35 6 6
Glebe	19 0 0	
Sparshalt Field	34 0 0	4 10 5
	£413 0 0	£39 16 11
Total Rents and Rates ...	£452 16 11	
Estimated value of farm house	20 0 0	
" " cottages	27 12 0	
" " farm buildings ...	20 0 0	
	£67 12 0	

Total acreage. 357 Consisting of :—
150 acres arable apportioned rental 16*s.* per acre.
207 acres pasture " " 5*s.* 8*d.* "

HORSE LABOUR No. 5.

COST OF HORSE LABOUR for year April 30th, 1918—1919.

	£ s. d.	£ s. d.
Grazing, 16 acres, summer period, 6 months—rent @ 25*s.* 8*d.*	20 10 8	
Rolling and harrowing same @ 5*s.* per acre	4 0 0	
Fencing, nails, wire, stone picking, thistle cutting, ditching, draining @ 8*s.*	6 8 0	
16 acres of aftermath @ 8*s.* per acre ...	6 8 0	
		37 6 8
4 tons of hay @ £7 10*s.* per ton ...		30 0 0
14 cwt. straw chaff @ 70*s.* per ton		2 9 0
15 qrs. oats @ 50*s* per qr. (or equivalent foods)		37 10 0
Winter Period, 6 months.		
15 tons hay @ £7 10*s.*		107 10 0
3½ sacks of oats per week = 91 sacks 50*s.* per qr.		113 15 0
558 lbs. straw chaff per week=6·81 tons @ 70*s.* per ton		23 17 0
490 lbs. roots per week=5·7 tons @ 30*s.* per ton		8 11 0
Cost of keep for 7 horses		£360 18 8
Cost per horse per annum		51 11 3
Other costs per horse.		
5 sets shoes @ 8*s.*, 4 removes @ 1*s.* ... (increase on pre-war period 200 %)		2 4 0
Average cost of harness, upkeep and replacement		2 10 0
Stable utensils and sundries		6 0
Veterinary attendance and medicines		8 0
Depreciation: value of horse £100, depreciated 15 %		15 0 0
Rent and rates of stable £1. General expenses 10*s.*		1 10 0
Interest on capital. Horse £100, harness £16 @ 5%		5 16 0
Estimated cost of litter £2 per horse ...		2 0 0
		£81 5 3
Estimated value of manure		4 10 0
Total cost per horse per annum		£76 15 3
" " week		£1 9 6

Average days worked per week 5. Cost per day 6*s.*
Average hours per day 7½.

MANGOLDS No. 1.

COST PER ACRE OF GROWING MANGOLDS IN 1918.

	£ s. d.	£ s. d.
Rent and Rates		16 0
15 tons of farmyard manure at 10*s.* ...	7 10 0	
Carting and spreading	1 15 0	
	9 5 0	
Proportion charged ½		4 12 6
5 cwt. basic slag @ 75*s.* per ton ...	18 9	
Proportion charged ⅔		12 6
1½ cwt. sulphate of ammonia @ 18*s.* ...		1 7 0
6 lbs. seed @ 2*s.* 3*d.* per lb.		13 6
1 ploughing at 25*s.* and 2 at 20*s.* ...		3 5 0
2 dragging and cultivating @ 5*s.* ...		10 0
1 rolling and 1 harrowing at 2*s.* 6*d.* ...		5 0
Drilling, harrowing and rolling ...		7 0
2 horse hoeings @ 6*s.*		12 0
2 hoeings and singling		1 13 0
Pulling and cleaning		1 8 0
Carting and pitting		1 10 0
Implements, allowance for repairs, etc.		1 0 0
General expenses, including broken time, unremunerative work, etc. ...		1 0 0
Interest on capital		11 6
Allowance for management		15 0
	£20 8 0	
Proportion of cleaning costs carried forward		10 0
Cost per acre		£19 18 0

Number of acres 7. Soil stonebrash.
The plant was a bad one owing to the difficult spring, and th crop further suffered through inability to hoe at the time require on account of shortage of labour. The yield was about 13 ton An average crop would be about 17 tons.

SEEDS HAY No. 5.

COST PER ACRE SEEDS HAY, 1918.

21 acres of hay. Clover 10 acres. Mixed seeds 11 acres.
For one year only. Seeds sown in 1917.
Clover was preceded by wheat in 1917.
Mixed seeds " oats "
Both wheat and oats received slag and sulphate of ammonia in 191

	£ s.	£ s.
Rent and rates per acre 16*s.* for 21 acres		16 16
Cost of seeds		26 3
Sowing 10 acres 6*s.*		
Drilling 11 acres 27*s.*		
Rolling. Heavy roller, 3 horses, 3 days £3 12*s.* ...		
Harrowing £1 16*s.*		7 1
Rolling seeds 1918, 2 horses, 3 days		2 14
Stone picking		5 0
3 days cutting, 2 horses (including overtime)		3 7
Turning, side raking, raking, cutting corners, outside, etc.		5 0
Carting, 6 horses and 8 men, 2 days @ 7*s.* 6*d.*		10 0
Thatching 2 ricks, 20 squares @ 1*s.* 9*d.*		1 15
1 ton straw		3 0
Rick pegs, string, staddling, water cart		1 10
Carting to station		6 0
General expenses, including broken time, unremunerative work, etc.		21 0
Interest on capital		4 1
Management @ 15*s.* per acre		15 15
Total Cost		£140 5
Cost per acre		6 13

Yield per acre, 23 cwt. Soil stonebrash.

NOTE.—11 acres was damaged by weather. The plant was goo consequently allowance should be made for the many ca in which the plant fails or is defective, amounting probab to 10%.

MILK No. 3.

COST OF PRODUCTION OF MILK.

May to September, 1918. Five months.
Average number of cows in herd, 33.
" " milk, 28.
Average value per head, £45.

	£ s. d.	£ s. d.	£ s.
Foods.			
48 acres pasture @ 52*s.* per acre ...	124 16 0		
Unconsumed Oct. 1st	10 0 0		
	114 16 0		
Manure, carting and spreading ...	15 0 0		
Rolling and harrowing @ 5*s.*	12 0 0		
Ditching and draining, fencing, nails, rails, wire, stone picking, thistle cutting	20 0 0		
	20 0 0		161 16
50 acres Aftermath @ 8*s.*			
15 tons Slag @ 80*s.* ... £60 0 0			
50 tons Farmyard manure @ 5*s.* 12 10 0			
⅛th credited to grazing account 72 10 0	9 1 8		
Rolling, harrowing, ditching, etc. (proportion charged	10 0 0		
			39 1
Fodder, green crops and roots			60 4
Cakes and meals			88 0
Labour			97 5
Depreciation on cattle			103 14
Rent and rates of buildings			5 0
Coal, veterinary and medicines, depreciation and upkeep of plant, insurance and sundries			44 13
Keep of bull			15 6
Delivery			24 0
Interest on £2,000 @ 5% for 5 months...			41 13
Management, 21 weeks @ 30*s.*			31 10
			712 2
Manurial value ⅛th £88 expenditure on cake	14 13 4		
12 calves 3 days old @ 30*s.*	18 0 0		
			32 13
Total Cost			£679 9

Amount of milk produced 11,300 gallons.
Cost of production, per gallon, 1*s.* 2·43*d.*

Farm No. 13—*continued.*

tober to April. 7 months.

erage number of cows in herd 44.

" " " in milk 35.

erage value per head £45.

pds.	£	s.	d.	£	s.	d.
Fodder, green crops, roots...				609	1	0
Cakes and meals				286	0	0
Grazing and aftermath				30	0	0
bour				174	18	0
preciation				191	13	0
nt and rates of Buildings...				7	0	0
il, oil, veterinary and medicines, depreciation and upkeep of plant, insurance and sundries				62	5	0
ep of bull				21	4	0
livery				37	0	9
erest on £2,600 @ 5% for 7 months ...				75	16	8
nagement, 31 weeks @ 30*s.*				46	10	0
				£1,541	8	5
Calves @ 30*s.* 3 days old	31	10	0			
expenditure on cake, manurial value ...	47	13	4			
				79	3	4
Total Cost ...				£1,462	5	1

Amount of milk produced. 13,030 gallons.

Cost of production per gallon, 2/2·93d.

erage daily yield of whole dairy :—

4 cows 7 winter months	1·4	gallons.	
5 ,, average number in milk ...	1·75	,,	
3 ,, 5 summer months	2·24	,,	
2 ,, average number in milk ...	2·64	,,	

is adjusted shows an average yield per cow per ann. of 638 gals.

TE.—The yield of 638 gallons per cow here indicated, is far beyond that of an average herd, and is primarily due to a careful selection of heavy milking cows. It was also influenced in the summer period by the abundance of grass in n this particular district. It is obvious, therefore, that the cost of production in the case of an average herd is much higher han in this particular instance.

DETAILS OF FEEDING AND LABOUR COSTS.

Foods—(*a*) Summer.

y 1 to 4. Rations, 12lbs. hay, 12lbs. straw, chaff 50 lbs. Mangolds
5 ,, 12 ,, 6 ,, 6 ,, ,, 25 ,,
12 tons Mangold fed on grass in August.
2 ,, hay fed to down calving and sick cows.
Bedding and litter £4 for period May to Sept.
Cotton cake principally consumed. Amount used as stated.
Grazing : Grass land charged above average rental, as it is much superior to arable land.

Winter.

ring 7 months consumed 20 tons turnips @ 25*s.* per ton, 70 ons mangolds @ 30*s.* per ton.

Litter used valued at £20.

four months, Oct. to Jan., the hay and straw chaff averaged er head per day. Hay, 9lbs. @ £7 5*s.* per ton. Straw and haff, 9lbs. @ £3 10*s.* per ton.

3 months, Feb. to April. Hay, 12 lbs. per cow per day. traw chaff, 12 lbs. per cow per day.

ount shown for cakes, etc., is what was actually used and onsisted of grains, nut cake, soya and cotton cake.

Labour—(*a*) Summer.

vman 39*s.* per week, ½ time charged in summer	£1	6	0	
milkers 33/4 ,, ½ ,, ,,	2	10	0	
ry work		2	6	
n's time delivery milk and attendance on horse		10	6	

Winter.

vman, whole time...	39*s.*	per week
,, ,, ...	30*s.*	,,
ilkers, half time	34*s.*	,,
iry help	2/6	,,
livery of milk	10*s.*	,,
	115/6	

3 Depreciation—

In the summer, 1918, I was replacing Shorthorns by pedigree Friesians, I have however assumed a value per cow of £45 ordinary commercial value, and placed depreciation as over. The figures are based on the average of 100 cows over a period of 3 years, 1912-3-4, amounting to about 16·5%.

4 General expenses—

Insurance £10. Veterinary £15. Coal, towels, oil, brushes, cloths, etc., £15. Medicine £4. Lime, upkeep yards, roads, £15. Stationery, stamps, wires, account books and sundries £6. Milk record £4. Market travelling and out of pocket expenses £22. Depreciation of plant and upkeep £15 18*s.* This sum of £106 18*s.* is allocated to the two periods.

5. Delivery—

Keep of horse (excluding labour attendance) shoeing and depreciation of same, also cart and harness.

6. Capital—

Summer Period.	£	s	d.	Winter Period	£	s	d.
33 cows @ £45 ...	1,485	0	0	44 cows @ £45 ...	1,900	0	0
1 bull	50	0	0	1 bull	50	0	0
Milk—horse and cart	90	0	0	Milk—horse and cart	90	0	0
Plant and equipment	200	0	0	Machinery and equipment	200	0	0
Working capital and sundries	175	0	0	Working capital and sundries	280	0	0
	£2,000	0	0		£2,600	0	0

7. Basis of Manurial value— ⅓ of cakes consumed.

FARM No. 14.

County, SALOP.

HORSE LABOUR No. 6.

Number of Work Horses 7.

AVERAGE COST PER HORSE FOR 1918-19.

Food. *Winter.* 30 weeks.						
14lbs. crushed oats per day @ 50*s.* per qr.	21	17	6			
16lbs. clover hay per day @ £7 15*s.* per ton	11	12	6			
6lbs. straw chaff per day @ £2 per ton	1	2	6			
8lbs. roots per day @ 25*s.* per ton ...		18	9			
Summer. 22 weeks.						
7lbs. crushed oats per day	8	0	6			
Grass @ 5*s.* per week	5	10	0			
				49	1	9
Shoes and Shoeing. 6 new sets @ 10*s.*...	3	0	0			
6 removes, &c., @ 4*s.*	1	4	0			
				4	4	0
Harness				2	10	0
Stable Equipment					15	0
Stable, rent, rates and repairs					10	0
Veterinary attendance and medicines ...				1	10	0
Depreciation. 10% on average value, £100				10	0	0
Interest on capital, 5%				5	0	0
Supervision and general expenses ...					10	0
				£74	0	9

No. of working days, 240.

Average cost of working day, 6*s.*

Cost of horseman, 8th May, 1919, onwards, 8*s.* 6*d.* per day.

Previous to that day, 7*s.* 6*d.* per day.

FARM No. 15.

County, LANCASHIRE.

Size of Farm: 300 acres arable. 27 acres pasture.

Soil: Mostly good loam in high condition.

System of Farming. Cropping. Practically everything sold off.

COSTS OF FOUR COURSE ROTATION—1918.

Horses taken @ 10*s.* and horseman @ 10*s.* per working day.

Labourers @ 9*s.* per working day.

FIRST COURSE—Potatoes.

POTATOES.—No. 4.

AVERAGE COST OF GROWING 62 ACRES—1918 CROP.

	£ s. d.	£ s. d.
Rent and tithes, £2 13*s.* 4*d.*, Rates, 6*s.* 6*d.*		2 19 10
Manure.		
15 tons dung @ £1 (purchased) ...	15 0 0	
Carting and applying	1 12 6	
Knocking manure and sowing artificials	13 6	
3 cwts. mixed artificials	2 0 0	
		19 6 0
Seed. 15 cwts. @ 10*s.*		7 10 0
Cultivations.		
Ploughing twice	4 0 0	
Cultivating, harrowing, rolling, etc. ...	1 12 6	
Drill and cover up	1 2 6	
Cutting, carting and planting	17 6	
Scarifying twice	1 10 0	
Ploughing up	1 7 6	
Harrowing, drill harrowing and rolling	17 6	
Weeding	17 6	
		12 5 0
Harvesting.		
Digging, picking and putting into carts	3 5 0	
Carting and pitting	1 12 6	
Winter covering	5 0	
Straw	5 0	
		5 7 6
Marketing.		
Dressing	2 5 0	
Carting to station	1 12 6	
Straw for railway trucks	5 0	
		4 2 6
		51 10 10
Use of hampers and boxes	12 6	
Wear and tear on implements and machinery	1 0 0	
Cleaning hedges and ditches	7 6	
Cost of lime dressing ¼ of 9½*s.* per acre	15 8	
		2 15 8
Interest on Capital—5 %		1 7 0
Management...		1 10 0
Total cost ...		£57 3 6
Less unexhausted manure... ...	7 0 0	
Share of cleaning costs	1 0 0	
		8 0 0
Net cost ...		£49 3 6

Average yield 1918—6 tons 17 cwts. ware and seed.

Average yield over 7 years—7½ tons and seed.

SECOND COURSE—Wheat.

WHEAT.—No. 11.

AVERAGE COST OF WHEAT PER ACRE AFTER POTATOES.—1918 CROP.

	£ s. d.	£ s. d.
Brought forward from potatoes		8 0 0
Rent, rates and tithes		2 19 10
Manure. Average cost of mixture per acre...		1 0 0
Seed. 3½ bush. @ 10*s.* and dressing 1*s.*...		1 16 0
Cultivations.		
Harrowing after potatoes	5 6	
Ploughing...	1 15 0	
Harrowing	5 6	
Sowing	7 6	
Harrowing	5 6	
Harrowing and rolling in spring ...	15 0	
Weeding	2 0	
		3 16 0
		£17 11 10
Harvesting.		
Opening out, cutting and twine ...	15 0	
Stooking and setting up	6 0	
Carting and stacking	1 0 0	
Thatching and materials	10 0	
		2 11 0
Threshing and weighing up		2 0 0
Loading and carting to station ...		7 0
Loading and carting straw to station ...		7 6
Wear and tear of implements and machinery		15 0
Hedging, ditching, etc.		7 6
Lime, ¼ of 9½*s.* per acre		15 8
Interest on Capital—5 %		18 0
Management		1 0 0
Total cost ...		£26 13 6
Less unexhausted manure... ...	3 10 0	
		3 10 0
Net cost ...		£23 3 6

Straw to be credited at £3 per ton.

Average yield 1918—41 bush. grain. 32 cwts. straw.

Average yield over 7 years—36 bush. grain. 28 cwts. straw.

THIRD COURSE—Oats.

OATS.—No. 7.

AVERAGE COST PER ACRE OF OATS AFTER WHEAT—1918 CROP.

	£ s. d.	£ s. d.
Brought forward from wheat ...		3 10
Rent, rates and tithes		2 19
Manure. Average cost of mixture ...		1 5
Seed. 5 bush. @ 50*s.* per qr.		1 11
Cultivations.		
Ploughing...	1 15 0	
Harrowing and cultivating	1 12 6	
Sowing	7 6	
Harrowing	5 6	
Rolling	3 6	
Weeding	2 0	
		4 6
		£13 12
Harvesting.		
Opening, cutting and twine	15 0	
Stooking and setting up	4 0	
Carting and stacking	1 0 0	
Thatching and materials	10 0	
		2 9
Threshing and weighing		2 0
Loading and carting to station		[illegible]
Loading and carting straw		7
Lime, ¼ of 9½*s.* per acre		15
Hedging, ditching, etc.		7
Wear and tear of implements and machinery		15
Interest on capital—5 %		10
Management...		1 0
Total cost ...		£22 3

Straw to be credited at £3 10*s.* per ton.

Average yield 1918—68 bush. grain. 32¼ cwts. straw.

Average yield over 7 years—56 bush. grain. 27 cwts. straw.

FOURTH COURSE.—Hay.

SEEDS HAY.—No. 6.

	£ s. d.	£ s. d.
Rent, rates and tithes		2 19
Manure and sowing—average cost		1 15
Seeds		1 5
Sowing, harrowing and rolling		12
Chain harrowing and rolling in Spring		8
Mowing twice		15
Turning, raking and cocking, two cuts		1 0
Loading, carting and stacking, two cuts		1 5
Thatching and dressing stacks, two cuts		12
Marketing—Lifted from stack...		
Hedging, ditching, etc....		7
Use of machinery and implements		10
Lime ¼ of 9½*s.* per acre		15
Interest at 5 %		6
Management		15
Total cost		£13 6

Average yield, 1918—45 cwts. (two cuts).

Average yield over 7 years—50 cwts. (two cuts).

NOTE.—This is an example of the very highest class of farmin full advantage being taken of the good markets available f all crops.

FARM No. 16.

County, BERKS.

HORSE LABOUR.—No. 7.

AVERAGE COST OF KEEPING A HORSE FOR YEAR 1918–19 (based on 26 horses).

	£ s. d.	£ s.
Foods.		
Oats, 12lbs. per day @ £17 per ton, 52 wks.	33 3 0	
Bran, 2lbs. „ @ £14 „ 32 „	2 16 0	
Hay, 24lbs. „ @ £7/15 „ 32 „	18 12 0	
Chaff, 7lbs. „ @ £2 „ 32 „	1 8 0	
Grass, 5*s.* per week for 20 weeks ...	5 0 0	
		60 19
Shoes, 8 sets @ 12*s.* (inc. removes) ...	4 16 0	
Harness	2 10 0	
Stable equipment	15 0	
Stable, rent, rates and repairs	10 0	
Veterinary expenses	1 0 0	
Depreciation...	3 0 0	
Interest, 5 % on £120	6 0 0	
General expenses and supervision ...	10 0	
		19 1
		£80 0

Average No. of working days, 230.

Average cost per working day, 7*s.*

Average cost of horseman, 7*s.* per day.

FARM No. 17.

ounty, CHESHIRE.

370 Acres. 350 are arable. 20 pasture.
Soil : Good black land.
Farming on 4 course system.

OTATOES No. 5.

COST PER ACRE OF POTATO CULTIVATION 1918.

	£	s.	d.
ent of land, rates and insurances	2	19	10
allowing and ploughing of land for potatoes twice	2	10	0
utting and cleaning of fences and ditchings ...		17	6
tons of farm yard manure 15*s.* per ton	15	0	0
cwt. sulphate of ammonia and 4 cwt. super. ...	2	1	6
pplying manure to land	2	6	6
cwt. of seed potatoes @ 10*s.* 6*d.* per cwt.	9	9	0
oxing and sprouting potatoes	1	0	0
arrowing of land previous to cultivation		3	0
ultivation of land twice over		16	0
arrowing of land twice over		6	0
rilling of land for planting		10	0
arting out seed		6	0
anting of seed		10	0
overing up after planting		10	0
oy harrowing drills down		3	6
arifying twice through		16	0
oeing and cleaning		16	9
rilling up twice over after	1	0	0
ne pair of horses with man and digger lifting ...		15	0
icking Potatoes, 28 persons @ 6*s.* per day—2½ acres per day	3	7	6
wo men loading into carts		14	0
arting to hog 8 tons per acre @ 3*s.* 6*d.*	1	4	6
rawing and hogging @ 6*s.* per ton	2	8	0
ressing out of hog, 8 tons @ 7*s.* per ton	2	16	0
arting to rails 3*s.* 6*d.* per ton	1	8	0
epairs and renewals and depreciation of implements	1	10	0
eneral expenses		10	0
nterest on capital 5%	1	10	0
anagement	1	5	0
	59	9	7
Less proportion manures carried forward 7 0 0			
Less proportion cleaning costs carried forward 1 0 0			
	8	0	0
	£51	9	7

Average yield of 8 tons per acre seed and ware on 90 acres.

HEAT No. 12.

COST OF GROWING WHEAT IN 1918 PER ACRE.

	£	s.	d.
ents, rates and insurance per acre	2	19	10
nexhausted manure and cleaning costs from potato crop	4	0	0
loughing and cleaning of land from tops	2	0	0
arrowing for sowing twice over		6	0
ost of seed	2	0	0
owing and harrowing		7	6
arrowing and rolling		7	6
utting, setting up, carting, stacking and thatching	3	5	0
hrashing and conveying grain to rail	2	10	0
edging, ditching		17	6
enewals, repairs and depreciation on implements ...		15	0
eneral expenses		10	0
nterest on capital		18	0
anagement...		18	0
	£21	14	4

Yield of 5 quarters of wheat per acre on 90 acres, and 28 cwts straw.

Straw to be credited @ £3 per ton.

CLOVER HAY No. 7.

AVERAGE COST PER ACRE 1918.

	£	s.	d.
Rent, rates and insurance	2	19	10
Cost of clover seeds	1	15	0
Sowing, harrowing and rolling twice	1	2	6
Artificial manures, 3 super. and 1 ammonia	1	17	6
Applying above		6	0
Cutting, turning, raking and rucking up	1	12	6
Carting, stacking and thatching	2	7	6
Hedging, ditching, etc.		17	6
Depreciation and repairs, renewal of implements ...	1	0	0
General expenses		7	6
Interest on capital		7	6
Management...		15	0
	£15	8	4
Add Proportion manurial and cleaning cost brought forward	2	0	0
Total cost	£17	8	4

Weight of clover 33 to 37 cwt. per acre on 85 acres.

OATS No. 8.

Average cost per acre, 1918.

	£	s.	d.
Rent, rates and insurance	2	19	10
Manure, 4 super. and 1 of ammonia and applying ...	2	9	6
Ploughing for oats	1	5	0
Harrowing and preparing land		9	0
Cost of seed	1	8	0
Sowing and harrowing		8	6
Rolling		5	6
Cutting, setting up, carting, stacking, etc.	3	5	0
Thrashing and conveying to rail...	2	10	0
Repairs, renewal of implements and depreciation ...		15	0
Interest on capital		18	0
Supervision and management		18	0
Proportion manure and cleaning costs from potatoes ...	2	0	0
	£19	10	10

Yield of 8 quarters of oats per acre on 60 acres, and 30 cwts. straw.

Straw to be credited @ £3 10*s.* per ton.

FARM No. 18.

County, GLOUCESTER.

HORSE LABOUR.—No. 8.

Size of Farm: 615 acres of poor, stony brash on Cotswold Hills rented @ £220 per annum. Considerable area practically waste land.

System of Farming: Five course cropping as a rule with sheep and cattle for manure. Four course apt to cause clover sickness. About 240 acres corn grown each year.

COST OF HORSE LABOUR FOR 1919 CROPS.

Foods.	£ s. d.	£ s. d.
32 weeks with 2 bush. oats per week @ 6s. 6d. per bush.	20 16 0	
32 weeks with ½ cwt. hay per week @ £5 per ton	6 8 0	
Straw for chaffing and litter	7 10 0	
20 weeks summer grass @ 4s. per week	4 0 0	
20 weeks with 1 bush. oats per week @ 6s. 6d. per bush.	6 10 0	45 4 0
240 acres straw @ £1 per acre ¼ charged to 8 horses.		
Shoes and Shoeing. From accounts ...		2 0 0
Harness and stable equipment		2 10 0
Veterinary attention and medicines ...		1 0 0
General expenses and supervision ...		10 0
Depreciation—£90 spread over 12 years...		7 10 0
		£58 14 0
Credit 10 loads manure @ 4s.		2 0 0
		£56 14 0

Average horse works about 3½ days per week.

Average cost per working day taken @ 6s. 6d. for horse and 8s. for man for 3½ days and 6s. per day for 2½ days per week—a total of 43s. per week.

NOTE.—1919 costs taken throughout.

ROOTS—No. 7.

FIRST COURSE—Roots.

	£ s. d.	Cost per acre. £ s. d.
Rent 10s., rates and insurance 2s. 6d. ...		12 6
Manure.		
4 cwts. supers., 28s., sulp. amm. or nitrate soda, 20s.		2 8 0
Seed: 2½ lbs. @ 2s. 6d.		6 3
Cultivations.		
3 ploughs—25s., 20s., 20s.	3 5 0	
2 cultivations—3 horses	12 0	
2 harrows " "	5 0	
1 roll " "	2 6	
Drill	3 0	
Roll	2 6	
Two hand hoeings	1 5 0	
Horse hoeing 3–4 times, 4s. each ...	14 0	
		6 9 0
Pulling and cleaning for sheep		1 0 0
Interest—5% on £14 per acre		14 0
General expenses—hedges, &c.		2 6
Management		15 0
Total cost ...		£12 7 3
Average yield 14 loads per acre at 7s. per load, charged to sheep		4 18 0
Charge to oats		4 0 0
" hay		2 0 0
" wheat		1 0 0
" oats or barley		9 3
		£12 7 3

SECOND COURSE—Oats.

OATS.—No. 9.

	£ s. d.	Cost per acre. £ s. d.
Brought forward from turnips ...		4 0 0
Residual value from cake and hay fed to sheep on turnips—1 acre carries 180 sheep one week—each sheep getting 1 lb. cotton cake and ½ hay per day—30s.—charge		1 0 0
Rent 10s., rates and insurance 2s. 6d. ...		12 6
Seed: 4 bush. @ 7s.		1 8 0
Cultivations.		
Plough	1 5 0	
3 harrows—3 horses	9 0	
Drill	3 0	
1 harrow 2s. 6d., roll 2s. 6d.	5 0	
Hand hoe	2 0	
		2 4 0
Carried forward		9 4 6

	£ s. d.	£ s. d.
Brought forward		9 4 6
Harvesting.		
Cutting, including 3 lbs. string ...	11 0	
Stooking	2 0	
Carting and stacking	10 0	
Thatching	4 0	
		1 7
Threshing		14
Carting to station—5 miles, very hilly road, including sack hire		11
Interest—5% on £14		14
General expenses		2
Management		16
		£13 8

Average yield over last 4 years—33½ bush. grain.
£1 per acre to be credited for straw.

THIRD COURSE.—Seeds Hay.

SEEDS HAY.—No. 8.

	Cost per acre. £ s.
Brought forward from turnip crop	2 0
Share of residue from cake-feeding of sheep ...	5
Rent and rates	12
Seed—10 clover 5 lbs. rye grass, including sowing ...	1 13
Cutting	5
Turning and cocking	4
Carting and stacking	17
Thatching and straw	4
General Expenses	2
Interest—5% on £14	14
Management...	7
Total cost ...	£7 1

Average yield per acre over last 4 years—15 cwts.
Aftermath grazed at 10s. per acre.

FOURTH COURSE.—Wheat.

WHEAT.—No. 13.

	£ s. d.	Cost per acre. £ s.
Brought forward from turnips ...		1 5
Share residue from sheep feeding ...		5
Rent and rates		12
Manure: 12 loads dung @ 7s. per load applied		4 6
Seed: 3 bush. @ 10s., including dressing		1 10
Cultivations.		
Plough	1 5 0	
3 harrows, 3 horses	3 0	
Drill	3 0	
1 harrow, 2 horses	2 6	
2 rolls	5 0	
Weeding	2 0	
		2 0
Harvesting.		
Cutting, including string	11 0	
Stooking	2 0	
Carting and stacking	11 0	
Thatching and straw	4 0	
		1 8
Threshing: 10 acres per day		14
Carting to station, 5 miles, very hilly road, including sack hire		11
General expenses		2
Interest: 5% on £14		14
Management...		15
Total cost ..		£13 16
Carry forward share of dung		16
Net cost ..		£13 0

Average yield over 4 years, 20¾ bushels grain.
Credit straw £1 per acre.

FIFTH COURSE.—Barley.

BARLEY.—No. 7.

	£ s. d.	Cost per acre. £ s.
Brought forward from turnips ...		9
" " " wheat ...		16
Rent and rates		12
Manure: 3 cwts. supers., 21s., nitrate soda or sulph. amm., 20s.		2 1
Seed: 3 bushels @ 8s.		1 4
Cultivations.		
Plough	1 5 0	
3 harrows, 3 horses	9 0	
Drill	3 0	
1 harrow, 2 horses	2 6	
1 roll	2 6	
Weeding	2 0	
		2 4
Carried forward		7 7

Farm No. 18—*continued.*

	£ s. d.	£ s. d.
Brought forward		7 7 3
Harvesting.		
Cutting, including string	11 0	
Stooking	2 0	
Carting and stacking	11 0	
Thatching and straw	4 0	
		1 8 0
Threshing		14 0
Carting to Station, including sack hire, 5 miles, very hilly road		11 0
General Expenses		2 6
Interest: 5% on £14		14 0
Management...		15 0
		£11 11 9

Average Yield over 4 years, 24 bushels grain, straw to be credited @ £1 per acre.

NOTES.—In some cases, seeds grazed for one year after hay and may just pay their way—poor grazing.

MUTTON No. 4.

COST OF FEEDING SHEEP ON ROOTS. (1919-20).

	Cost per week. £ s. d.
180 Sheep will consume 2 loads (12 cwt. each) per day @ 7*s.* per load, 14 loads will last 180 sheep one week, *i.e.* per sheep per week	6½
1 lb. Cotton Cake per head per day on average @ £20 per ton	1 3
½ lb. Hay per head per day on average @ £10 per ton	3¾
Attendance, 1 man to 180 sheep @ 42*s.* per week ...	2¾
Total Cost per week ...	2 4
Deduct manurial residue	2½
Net Cost per week ...	2 1½
Teg cost about 65*s.* to go on to roots	3 5 0
26 weeks feeding @ 2*s.* 1½*d.* per week	2 15 3
	6 0 3
Deduct value of skin	18 0
	£5 2 3

Average dead weight when sold 65 lbs.
Cost per lb. dead weight = 1*s.* 7*d.*

NOTE: Interest on capital and management have been charged through crops. No allowance has been made for deaths and for sheep doing badly.

BEEF No. 4.

COST OF FEEDING CATTLE (1919-20).

Feeding Period—24 Weeks.

	£ s. d.
1 cwt. roots per day @ 8*s.* 6*d.* per load (12 cwts.)—at yard	5 19 0
Straw for fodder and bedding	2 10 0
6 lbs. Cotton Cake, etc. per day @ £20 per ton ...	9 0 0
Attendance—one man attends 60 cattle @ 45*s.* per week	18 0
Total Cost	18 7 0
Deduct 9 loads dung @ 4*s.*	1 16 0
Net Cost	16 11 0
Buying price—7 cwts. @ 80*s.* per live cwt.	28 0 0
Total Cost	44 11 0

Probable increase in live weight 13 lbs. per head per week, assuming cattle all thrive well, *i.e.*, 3 cwt. in 24 weeks.
Live weight when sold 9¾ cwts.
Cost per live cwt. = 91*s.*

Interest on capital, management and rent and rates on buildings charged through crops. Straw credited to crops @ £1 per acre —£240 in all. Three-fourths charged to 70 cattle, *i.e.*, about 50*s.* each as above. No allowance made for deaths or cattle thriving badly.

N.B.—The above estimate of cost of beef takes a rather optimistic view of present conditions. In point of fact, the farmer is so convinced that cattle won't pay, that he is not attempting to fatten any, with the result that straw will become more or less of a waste product and the fertility of the land will suffer for want of the dung.

Note on above case.

This case is typical of many farms on the poor land of the Cotswolds. It is not possible to distribute the costs on roots with mathematical accuracy over the various crops, but if too much has been charged to one, too little has been charged to another crop. The charge for roots against sheep and cattle is based upon local custom, and it is clear that these have been charged as much as or more than they can afford to pay under present conditions. At the same time on such land corn growing and stock feeding must go hand in hand—the one cannot be carried on for long without the other.—J.W.]

FARM No. 19.

County, BERKSHIRE.

POTATOES No. 6.
Size of Farm: 385 acres. 325 acres arable. 60 acres pasture.
Soil. Loam, with flints.
System of Farming. 4 course.

COST PER ACRE OF GROWING 60 ACRES ON STRONG LOAM—1918 CROP.

(Horseman @ 5*s.* 6*d.* per day and horses @ 7*s.* per working day.)

	£ s. d.	£ s. d.
Rent		1 10 0
Rates		5 1
Manure. 20 tons Farmyard and Town stable manure, carting and spreading ...	12 0 0	
Artificials.		
2 cwt. sulphate of ammonia @ 16*s.* 3*d.*	1 12 6	
2 „ bone flour @ 12*s.* 6*d.*	1 5 0	
3 „ superphosphate @ 6*s.* 6*d.* ...	19 6	
4 „ flue dust potash @ 4*s.* 3*d.* ...	17 0	
Carting same from station	2 6	
Powdering, riddling and mixing same and rebagging	4 0	
Carting out and sowing in ridges ...	3 6	
Seed.		17 4 0
Cost in Scotland per ton	7 15 0	
Railway carriage...	1 18 0	
Cartage from station	5 0	
Hire of bags	5 0	
Storage for 2 months, sorting over, loss of weight through dryage and disease, hauling to field and loss on bags not returned in good condition, per ton	12 6	
Total cost	10 15 6	
18 cwt. per acre on average	9 13 6	
Cost of planting by hand	7 6	
Cultivations.		10 1 0
Ploughed twice—¾ acre per day ...	2 13 0	
Cultivated twice by Government tractor	14 0	
Harrowed 3 times	7 6	
Ring rolled	2 6	
Picking and taking off couch	3 6	
Opening ridges—2½ acres per day ...	8 0	
Splitting ridges after planting... ...	8 0	
Harrowing down ridges	2 0	
Moulding up ridges	8 0	
Harrowing down ridges again ...	2 0	
Grubbing 3 times—2 horses each time	1 4 0	
Hand hoeing	12 6	
Final moulding up	6 6	
Spraying.		7 11 6
40 lbs. Strawsonite in 2 dressings @ 65*s.* per 100 lbs.	1 6 0	
2 men with sprayer and 1 horse do 8 acres per day twice over	5 0	
1 man and horse drawing water ...	3 0	
Harvesting and Clamping.		1 14 0
1 man and 3 horses dig 2½ acres per day	11 0	
1 man with horse and harrow	5 0	
20 pickers do 2½ acres per day ...	2 0 0	
4 men, horses and carts carting to clamp	1 2 6	
Harrowing and collecting haulm and missed potatoes	9 6	
2 men clamping and covering with straw	4 9	
Straw for covering	15 0	
Earthing up	5 9	
Straw for thatching clamps and putting on	6 0	
Marketing.		5 19 6
Opening pit and riddling and sorting	1 18 0	
Carting to rail and loading trucks (3 miles)	1 17 6	
Repitting seed—one-fifth of crop and at one-fifth of original cost of clamping and covering and riddling	12 6	
Incidental Expenses.		4 8 0
Trimming hedges	2 0	
Share of up-keep of roads	2 0	
Depreciation, repair and renewal of machinery	10 6	
Depreciation and loss on bags, baskets, &c.	4 0	
Cost of supervising, weights, string, issuing accounts, and all booking ...	5 0	
		1 3 6
Interest on Capital		1 5 0
Management...		1 0 0
Total cost ...		52 1 7
Deduct—Proportion cost of manures:		
Dung ... 4 0 0		
Artificials ... 5 6		
Proportion of cleaning costs 1 10 0		
		5 15 6
Net cost ...		£46 6 1

Average yield for 1918—7 tons seed and ware, per acre.
Average yield for 1915-16-17—5 tons do. do.
1919 crop is "very poor."

County, ESSEX. **FARM No. 20.**

Size of Farm : 160 acres arable, 63 acres pasture.
Soil : Three horse land.
System of Farming. Five course cropping—bare fallow every fifth year.

COST OF BARE FALLOWING OF 16½ ACRES IN 1918.

This statement is an actual record of expenses of bare fallowing the field in question.

		£	s.	d.
Feb. 1918.	Steam ploughing	12	2	3
	Ploughing headlands, 2 men and 3 horses 3 days	3	15	0
	3 Tons coal @ 38*s.* per ton	5	14	0
	Carting same 5 miles	1	5	6
	Carting coals and water to engines, 2 men—2 days 17*s.* 4*d.*, 8 hours overtime each man @ 7½*d.*, 10*s.*	1	7	4
	Do. 4 horses for same time	2	0	0
June.	Tractor ploughing	15	10	0
August.	Twice steam cultivated	16	7	6
	3½ tons coal @ 40*s.* 6*d.* per ton	7	1	9
	Carting 7 miles—2*s.* 6*d.* 1st mile, 1*s.* 6*d.* 6 miles	2	0	3
	Carting coal and water to engines—1 man 2½ days 12*s.* 6*d.*, 3½ hours overtime 2*s.* 7½*d.*	15	1	
	2 horses and 1 cart for same	1	11	2
	Carting off rubbish—			
	3 men ½ day 8*s.*, 2 horses and carts 6*s.*	14	0	
	4 „ ½ „ 10*s.* 8*d.*, 2 horses and carts 6*s.*	16	8	
	Burning rubbish—1 man ½ day	2	6	
	Twice horse cultivated	8	0	0
	Horse ploughed for drilling	24	0	0
	One year's rent	16	8	3
	„ rates	12	3	
		120	3	6
	Add General expenses	8	0	0
	Interest on Capital 5%	6	8	0
	Management	8	0	0
	Total Cost	£142	11	6
	Cost per acre	£8	17	0

NOTE.—This land must be bare fallowed every fifth year.

OATS (WINTER) No. 10.

COST OF PRODUCTION OF 8 ACRES WINTER OATS, 1918 CROP.

				£	s.	d.
Rent				£8	0	0
Rates					6	3
Manure :						
5 cwts. supers per acre @ £6 13*s.* per ton	13	6	0			
Carting 7 miles		16	0			
Applying		12	0			
1 cwt. sulph./amm. in Spring per acre	6	12	0			
Applying		12	0			
				21	18	0
Seed. 4 bush per acre @ 70*s.* per qr.				14	0	0
Cultivations :						
Harrowing stubble 16*s.*, burning rubbish 6*s.*	1	2	0			
Ploughing, 3 horses	12	0	0			
Drag, harrowing, 2 men, 4 horses	1	12	0			
„ cross ways	1	12	0			
Drilling	2	0	0			
Rook and game scaring		5	0			
Two harrowings	1	12	0			
Spring harrowing		16	0			
„ rolling		18	0			
Weeding, thistle and docks	1	12	0			
				23	9	0
Harvesting :						
Cutting	1	12	0			
Twine and oil	2	0	0			
Stocking and setting up	1	5	6			
Carting and stacking, 5 men, 2 women	3	16	6			
Horse raking 10*s.* 9*d.*, carting rakings 8*s.* 9*d.*		19	6			
Thatchings 17*s.* 6*d.*, pegs and twine 5*s.*	1	2	6			
				10	16	0
Threshing @ 3*s.* 9*d.* per qr.	7	2	6			
Coals	1	6	0			
Thatching straw stack		12	0			
				9	0	6
Carting corn to station @ 1*s.* 3*d.* per qr.	2	7	6			
Hire of sacks		4	0			
				2	11	6
Trimming round field		11	8			
Hedging and ditching		10	0			
				1	1	8
Use of machinery and implements	2	0	0			
General expenses	2	0	0			
One quarter cost of bare fallows	15	0	0			
Interest on capital @ 5%	1	7	0			
Management	6	0	0			
Total cost				£117	9	11
Cost per acre				14	13	9

Average yield, 44 bushels grain ; 20 cwts. straw.

WHEAT No. 14.

COST OF PRODUCTION 8 ACRES, 1918 CROP.

				£	s.	d.	£	s.
Rent							8	0
Rates								6
Manure :								
5 cwts. supers per acre @ £6 13*s.* ton				13	6	0		
Carting same 7 miles					16	0		
Application					12	0		
1 cwt. sulph/ammonia per acre				6	12	4		
Application					12	0		
							21	18
Seed. 2½ bush. per acre @ 90*s.* per qr.				11	5	0		
Dressing seed					2	4		
							11	7
Cultivations :								
Harrowing stubble					16	0		
Steam ploughing				7	0	0		
Coals and carting for same				3	15	0		
Carting coal and water to engine					17	0		
Ploughing headlands				1	10	0		
Drag harrowing—2 men, 4 horses				1	12	0		
Do. crossways				1	12	0		
Drilling £2, rook and game scaring 5*s.*				2	5	0		
Two harrowings				1	12	0		
Spring harrowing 16*s.*, rolling 18*s.*				1	14	0		
Thistling and docking				1	12	0		
							24	5
Harvesting :								
Cutting 32*s.*, twine and oil 40*s.*				3	12	0		
Shocking and setting up				1	5	6		
Carting and stacking, 5 men and 2 boys				3	16	6		
Horse raking 10*s.* 9*d.*, carting rakings 8*s.* 9*d.*					19	6		
Thatchings 17*s.* 6*d.*, pegs and twine 5*s.*				1	2	6		
							10	16
Threshing @ 4*s.* per qr.				4	16	0		
Coals				1	6	0		
Thatching straw stack					12	0		
							6	14
Carting to station, 1*s.* 6*d.* per qr.				1	16	0		
Hire of sacks					4	0		
							2	0
Hedging and ditching 10*s.*, trimming round field 11*s.* 8*d.*							1	1
Use of implements and machinery							2	8
General expenses							2	0
Share of bare fallowing every fifth year, say £60							15	0
Interest on capital, 5%							1	19
Management							6	0
Total cost							£113	15
Cost per acre							£14	4

Average yield, 24 bush. per acre grain.
15 cwts. „ straw.

FARM No. 21.

County, SUSSEX.

HORSE LABOUR.—No. 9.

Number of horses, 11.

NOTE.—This statement on the cost of horse labour is based up actual records which have been kept since Michaelmas, 19

COST OF KEEPING 11 HORSES, OCTOBER, 1918, to MARCH, 1919—26 WEEKS.

				£	s.	d.	£	s.
Foods.								
Hay, 231 cwts. @ £7 10*s.* per ton				86	12	6		
Oats, 861 bushels @ 6*s.* 2*d.*				265	9	6		
Wheat chaff. 15 tons, 1¼ cwts. @ £3				45	4	6		
							397	6
Shoeing. Once per month, 9*s.* each time							29	14
Harness. Per contract, 50*s.* per ann.							13	15
Rent and rates. On stable							10	0
Veterinary attendance and medicines, average							5	10
Depreciation. Horses sold when fair young							22	0
Labour of attendances, proportion of wages							71	5
Interest on capital. 5% on £1,140							28	10
General expenses and supervision							5	10
							£583	10

Litter against manure.

Actual number of horse days for period	...	1,481
Average cost per horse for period	...	£53 8*s.* 3*d.*
„ working days horse for period	...	134·6
Average cost per working day	...	8*s.*

FARM No. 22.

County, NORFOLK.

BARLEY No. 8.

Statement of cost of cultivation, cropping, harvesting, and delivery of four acres of Barley grown in the year 1917, at Deopham, near Wymondham, Norfolk, on medium mixed soil land, being the entire amount of a small holding with double cottage, garden, and premises, let at an annual rental of £18 per annum, the tenant paying rates.

This crop of Barley was grown from seed supplied from a 1916 crop of pedigree Archer Barley, and following a crop of barley, three acres, and hay, one acre.

The manure consisted of the following compound :—Nitrogen, 1·10%; phosphate, soluble and citric soluble, 8·00%; insoluble phosphates, 7·00%; potash, 1·50%.

The charges for cultivation are based on the actual cost of labour, the minimun cost of keep of horses and attendance to same, and an allowance for wear and tear of implements, and supervision.

The harvesting was by contract, and includes cutting, carting, and stacking.

The assessment for rating purposes in 1917 was £6 15*s.* on house and premises and £6 5*s.* on agricultural land.

May 3rd, 1917.	£.	*s.*	*d.*
Man and 2 horses, ½ day ploughing @ 15*s.* per day		7	6
" " 3 " ¾ " " @ £1 "		15	0
" " 3 " 1 " " @ £1 "	1	0	0
May 7th, 1917.			
Man and 3 horses, 1 day ploughing and cultivating @ £1 per day	1	0	0
Man and 3 horses, 1 day cultivating and harrowing @ £1 per day	1	0	0
Man and 1 horse, ½ day rolling @ 10*s.* per day ...		7	6
" 1 " ¼ " " @ 10*s.* " ...		2	6
" 3 horses, ¼ day harrowing @ £1 per day ...		5	0
Man and two horses and disc drill, ½ day @ £1 10*s.* per day		15	0
Man and two horses, ½ day harrowing @ 15*s.* per day		7	6
Use of implements and supervision £1	1	0	0
10 cwt. manure @ £6 15*s.* per ton	3	7	6
3 coomb seed barley @ £2 per coomb	6	0	0
Total	£16	7	6
Labour.			
Paid for sowing manure and rolling barley		4	0
Molecatching		2	0
Harvesting	5	0	0
Threshing.			
Threshing machine and drivers	1	0	0
7 men @ 3*s.* each	1	1	0
Beer		4	0
Coal		11	0
Carting corn to Attleboro'		15	0
Rent	9	0	0
Rates, 1917		13	7
	£18	10	7
Receipts.			
By sale of 22 coomb barley @ 32*s.*	35	4	0
" 2 " " @ 29*s.*	2	18	0
" 1 bushel dross corn @ 25*s.*		6	3
	£38	8	3
Cost of cultivation, seed, and manure	16	7	6
Harvesting, threshing, &c.	18	10	7
Total cost	34	18	1
Balance	3	10	2
	£38	8	3

In making the above statement, nothing is charged for the use of horse and roll (3 hours), also carting ½ ton manure from Attleboro' station (3½ miles).

No allowance is given for the labour of the occupier and his wife in weeding the four acres of corn, superintending threshing and loading and weighing corn for delivery, and other sundry labour by same throughout the season for fencing, &c., &c.

The estimated value of the straw is also not given in receipts, the same was very inferior quality and comparatively small quantity.

FARM No. 23.

County, NORTHANTS.

Size of Farm : 743 acres Arable. 336 acres Pasture.
Cropping, breeding sheep and cattle and fattening same.
Horses : 13 regular work horses.

FARMING COSTS ON 2 HORSE LAND ON A FOUR COURSE ROTATION.

1, ROOTS. 2, BARLEY. 3, SEEDS. 4, WHEAT.

1918 COSTS.

ROOTS No. 8.	£	*s.*	*d.*
3 Ploughs @ 21*s.*...	3	3	0
2 Scuffles " 3*s.* 6*d.*		7	0
2 Harrows " 2*s.*		4	0
2 Rolls " 2*s.* 6*d.* and 1*s.* 6*d.*		4	0
Drill 3*s.*		3	0
3 Horse hoes @ 3*s.* 6*d.*		10	6
Setting out and hand hoeing		18	0
2 Scuffles		7	0
Seed, 2lbs. @ 3*s.*		6	0
4 cwt. Artificial	1	6	0
Sowing and carting		2	0
Getting up and banking	1	0	0
Rent and rates	1	10	0
Establishment charges	1	0	0
Interest on capital		5	6
Management		15	0
	£12	1	0
Less 13 tons @ 10*s.* per ton consuming value	6	10	0
	£5	11	0

Divided between :—

	£	*s.*	*d.*
Barley	£3	15	0
Seeds	1	15	0

BARLEY No. 9.	£	*s.*	*d.*	£	*s.*	*d.*
From Swedes				3	15	0
1 Plough				1	5	0
Cultivating					3	6
2 Harrows...					4	0
Drill					5	0
Cambridge roll					2	6
Seed, 3 bushels @ 10*s.*				1	10	0
Hoeing					6	0
Cutting round		1	3			
Cutting		15	0			
Setting up		3	0			
Thatching		3	0			
Carting and raking		15	0			
Threshing	1	0	0			
Marketing—3 miles		4	9			
				3	2	0
Rent and rates				1	10	0
Establishment charges				1	0	0
Interest on capital					6	0
Management					15	0
				£14	4	0

Average yield 4 qrs. per acre.

SEEDS HAY No. 9	£	*s.*	*d.*
From Swedes	1	15	0
Seeds, 14 lbs. @ 3*s.*	2	2	0
Drill, 3*s.*		3	0
Roll		1	6
Rent and Rates	1	10	0
Getting, stacking and thatching	1	15	0
Establishment charges	1	0	0
Interest on capital		4	0
Management		7	6
	£8	18	0
Carry to Wheat	1	10	0
Net cost	£7	8	0

WHEAT No. 15	£	*s.*	*d.*
From Seeds	1	10	0
1 Plough	1	5	0
Drill		4	0
2 Harrows		4	0
Seed, 3 bushels	1	13	9
Harrow		2	0
Cambridge roll		2	6
Weeding		10	0
Harvesting, threshing, &c.	3	5	0
Rent and Rates	1	10	0
Manure carting and spreading, labour only ...	1	5	0
Establishment charges	1	0	0
Interest on capital		9	0
Management		15	0
	£13	15	3

Average yield 4 qrs. per acre.

NOTE.—No credit for straw as it is put against manure.

FARM No. 24.

County, BERKS.

Size of Farm: 180 acres Arable; 80 acres Pasture; 10 acres Waste and Homestead.

System of Farming: Chiefly milk selling.

Soil: Arable land, thin gravel; Pasture, part clay and part low meadows which used to be watered.

Rent: £230 per annum.

Farm-house	£20 per annum.	
Buildings	30	„
	20 for cows.	
	7 for horses.	
	3 for pigs and poultry.	
Land	£180.	
	Arable, 10*s.* per acre.	
	Pasture, 25*s.*	„

NOTE.—A fair average dairy farm for district. Foods charged for are exact, as there are only cows on this farm, the young cattle being at an "off" farm. Dry cows are kept in in winter and fed with the herd, which this year consisted of 35 cows.

Milk records kept, and in this year the average was 698 gallons per cow per annum. This high yield was partly due to a favourable summer for grass and also to a plentiful supply of roots.

HORSE LABOUR 1918–1919.

HORSE LABOUR, No. 10.

Average number of horses, 10.

COST OF ONE HORSE.

	s.	*d.*		£	*s.*	*d.*
Summer. 20 weeks. Each horse grazed 1½ acres at rent and rates 28*s.* 4*d.* = 42*s.* 6*d.* for 20 weeks	2	1½	per week			
Best oats, fully 1 bushel per week ...	7	6				
½ cwt. chaff	2	6				
	12	1½	per week	12	2	6
Winter. 32 weeks. Fully 2 bushels best oats	15	0				
1 cwt. chaff	5	0				
2 trusses best hay	8	0				
	28	0	per week	44	16	0
			Total ...	£56	18	6
Average cost of shoeing, per accounts				2	5	0
„ „ repairing harness, per accounts ...				3	14	6
Depreciation on harness (cost £12 10*s.*)				1	8	0
Vet. and Medicines (including condiments) on 10 working horses and 3 colts, say				1	0	0
Depreciation. 10 horses at £80 each. To keep this standard I have to buy one each year at £120 and sell one out at £40. This leaves £80 depreciation. Insurance of others against death costs £40 per year. Total £120 on 10 horses				12	0	0
Stabling, ⅓ of buildings for total horses				1	0	0
Interest. Each horse valued at £80, 5 per cent. ...				4	0	0
Harness, brooms, brushes, lanterns, &c., £24 ...				1	5	0
				£83	3	0

Litter is allowed for manure.
Cost of horse, 6*s.* 4*d.* per day.

Average number of working days (allowing for wet days, illness, shoeing, &c., 5 days per week worked), 260.

Wages.		*s.*	*d.*			
1st half.	2 carters @	33	0			
	Cottages	3	0			
	Michaelmas	2	0			
		38	0			
	1 2nd carter @	30	0			
	1 3rd „	22	6			
	1 boy „	12	0			
		140	6	per week for 10 horses.		
2nd half.	5 carters @	43	6			
	Cottages	3	0			
	Michaelmas	2	0			
		48	6			
	1 2nd carter @	39	6			
	1 3rd „	33	0			
	1 boy „	14	0			
		185	6	per week.	84	1	4

Average 32*s.* 4*d.* per week for 5 men and boys.
Average cost of horsemen per week, 32*s.* 4*d.*
Average number of working hours, 8.
Each man costs 6*s.* 6*d.* per day.

COST OF GROWING 13 ACRES MANGOLDS.

At per Acre, 1918.

MANGOLDS No. 2.	£	*s.*
Rent and Rates		12
25 loads of farmyard manure @ 10*s.*	12	10
5 cwt. superphosphates, per acre	1	13
Sowing		1
1 cwt. ammonia, 1 sowing same		16
Seed (Sutton's Prizewinner), 10 lbs. @ 3*s.* 6*d.* ...	1	15
2 ploughings @ 25*s.* 6*d.*, rate ⅔ acre day	2	11
2 4-horse draggings with 2 men at 10 acres day @ 3*s.* 9*d.*		7
„ cultivating „ 10 „ 3*s.* 9*d.*		7
3 2-horse harrowing, 1 man, at 10 „ 1*s.* 11*d.*		5
2 „ rolling „ 10 „ 1*s.* 11*d.*		3
Drilling, 2 horses, 3 men, 10 acres day		3
2 horse hoeing, single, 1 man, 1 boy, 2 acres day ...		19
2 „ double „ „ 5 „ ...		7
Handhoeing twice @ 15*s.*, 20*s.*, 35*s.*	1	15
Pulling	1	0
Carting, 7 men, 4 horses, 2 acres day	1	15
Covering in trimmings and earth		5
Proportion, hedging, ditching		5
Management	1	0
Use of implements, repairs, &c.		17
Interest on outlay before implements are added, 5 per cent. for ½ year	1	9
	£31	1

Yield per acre as per cows account, and also estimated in t heap at 22 tons per acre. Charged to cows @ £1 per t Remaining cost carried forward to corn, &c.

MILK No. 4.

COST OF MILK PRODUCED FROM MAY 1ST TO SEPT. 30TH, 1918.

	£	*s.*	*d.*
Foods. 4 tons 11 cwts. hay @ £6 per ton	27	6	
2 tons palm kernel cake, 1 ton cocoanut cake ...	49	19	
2 „ cotton cake	33	0	
	£110	5	
Grazing. 60 acres @ 25*s.* £75 0 0			
9½ acres aftermath 9 0 0			
Rates on above 4 10 8			
	84	10	
Chain Harrowing and Rolling, 60 acres @ 4*s.*	12	0	
Wages. Cowman 33*s.* per week.			
3*s.* Cottage.			
1*s.* 6*d.* Michaelmas money.			
1*s.* 6*d.* Milk.			
39*s.*			
2nd Cowman part time, 21*s.* 6*d.* per week.			
Youth, part time, 14*s.* per week, 1*s.* Michaelmas money, Total, 15*s.*			
Self 2½ hours milking each morning, valued at 14*s.* per week.			
Total. 22 weeks @ 89*s.* 6*d.* per week	98	9	
Insurance	1	0	
Rent of buildings at £20 per year	8	10	
Rates	1	6	
Bull. 2½ trusses hay per week @ 3*s.*, cake 2*s.* 6*d.*, total 10*s.* per week	11	0	
Repairs. Implements, utensils, brooms, brushes, &c....	5	0	
Depreciation on Machinery. 10 per cent. on value (all new 1915)	8	15	
Vet. and Medicines. As per accounts	4	13	
Fencing, hedging and ditching, proportion on grass land	13	10	
Basic Slag. 8 tons applied to 20 acres, ½ cost	10	14	
Distribution. Man's part wages 6*s.* 6*d.* per week			
Keep of horse 5*s.* 0*d.* „			
11*s.* 6*d.* „ ...	12	13	
Depreciation and repairs, cart 4 5 0			
Depreciation and repairs, harness 1 13 6			
Depreciation on horse ... 3 15 0 @ £9 per year.			
Shoeing 1 15 0			
	11	8	
Management. This is reckoned at half owner's time on 400 acres at £400 per year, and includes all time spent on milk records, pedigrees, &c.	44	0	
Depreciation. This has been considered specially, and every loss ascertained from accounts. These prove that on an average 8 cows have to go out annually (fat, barren, bad quarters or die) @ £25 each. To replace these 8 heifers have to be purchased at £50 each to keep up the herd. This leaves a net loss of £200 per year	84	14	
Expenses Milk Record Society, markets, and droving cattle to and from the place of sales @ £26 per year	11	0	
Interest. 35 cows @ £40 each, equals £1,400 @ 5 per cent. per year	29	14	
	£563	3	
Less 12 calves sold for	30	2	
	£533	1	

Milk produced during period. This included all milk sent London, sold privately, consumed in household, for calves a employees, 10,367½ gallons. Net cost per gallon 1*s.* 0½*d.*

Farm No. 24—*continued.*

COST OF MILK PRODUCED FROM 1st OCTOBER, 1919, TO 30th APRIL, 1919.

Practically all milk sent to Reading Station, 4¼ miles.

EXPLANATION OF COSTS OF FOOD.

Mangolds, swedes and turnips and cabbage are all charged at 1 per ton, which was their actual cost of production as submitted erewith.

No charge is made for carting into cowstall as this is included h part time 3rd cowman, and also in keep of milk horse. This orse carted them in. Hay is charged £8 per ton as it was the ery best, and had to be tied and carted in from rick to cowstall. at straw chaff is charged at £5 per ton as an average. Quite alf of this was purchased, and when carted home cost conderably more than this. All cakes are charged exact cost plus arting.

For explanation of other items see summer period.

	£ s. d.
ay. 210 days, 1½ cwt. hay per day (clover) @ £8 ...	126 0 0
raw. 210 days, 24 tons of best oat straw chaff @ £5	120 0 0
oots.	
Oct. 28 days. 2 loads, viz., 24 cwt. cabbage per day @ £1 per ton	33 12 0
Nov. 28 days. 1 load, 12 cwt. cabbage per day @ £1 per ton	16 16 0
Nov. 28 days. 1 ton of turnips per day @ £1 per ton	28 0 0
Nov. 14 „ 1 „ „ „ „ ...	14 0 0
Dec. 14 „ 1 „ swedes „ „ ...	14 0 0
„ 28 „ 1 „ „ „ „ ...	28 0 0
„ 28 „ 1 ton of mangolds per day @ £1 per ton	28 0 0
Jan. to Apl. 112 days. 2 tons of mangolds per day @ £1 per ton	224 0 0
kes.	
4 tons fish meal	99 4 0
15 cwt. cotton cake	13 12 9
2 tons palm kernel cake	34 15 4
10 „ semi decor.	141 11 0
2 „ „	39 13 0
1 ton dairy cubes	20 3 0
1 „ O.C.O. dairy meal	19 8 1
Carting 20 tons 15 cwt. cake from Theale Station, 2¼ miles	6 6 0
	£1,007 1 6
bour. 30 weeks at £6 16*s.*	204 0 0
Cowman. 37*s.* weekly. 3*s.* cottage. 2*s.* milk. 1*s.* Michaelmas. — 43*s.*	2nd cowman. 35*s* weekly. 3*s.* cottage. 2*s.* milk. 1*s.* Michaelmas. — 41*s.*
Boy 18*s.* part time milking. „ 20*s.* „ „ carting roots. Self 14*s.*, 2½ hours milking, mornings.	
Insurance	1 10 0
Rent of Building (*see* summer period)	11 10 0
Rates	2 0 0
	£1,226 1 6

	£ s. d.
preciation on cows (*see* summer period)	115 6 0
„ „ machinery	12 5 0
pairs to machinery	5 10 0
plements and Utensils	7 0 0
t. and Medicines	9 9 6
l for engine and lamp, 4 gallons weekly	12 0 0
ansport.	
Keep of horse @ 22*s.* 6*d.* :— *s.* *d.*	
2 trusses hay @ 4*s.* 8 0	
2 bushels oats @ 6*s.* 12 0	
Chaff 2 6	
£1 2 6	£ s. d.
Man's wages, part time @ 10*s.*	33 10 0
Milk cart	15 0 0
Harness—repairs and depreciation ...	5 18 0
Shoeing	2 5 0
Depreciation on horse	3 0 0
	2 10 3
	62 3 3
ep of bull, 30 weeks @ 11*s.* 6*d.*—2 trusses hay @ *s.*, linseed cake, 3*s.* 6*d.*	17 5 0
nagement—see summer period	60 0 0
purses „ „	15 0 0
erest „ „	40 10 0
. Straw for litter not charged.	
	1,582 10 3
Less 24 calves	68 10 0
	£1,514 0 3

Milk produced during period—13,703 gallons.

	s. *d.*
Cost per gallon	2 2¼
Less manurial value ...	0 1
Net cost per gallon ...	2 1¼

FARM No. 25.

County, CHESHIRE.

Size of Farm : 108 acres arable. 42 acres pasture.

System of Farming : Cropping and Dairying.

MILK No. 5.

COST OF PRODUCTION OF MILK FROM 1st MAY, 1918, TO 30th APRIL, 1919.

FIRST PERIOD, 1st May, 1918, to 30th October, 1918.

Foods (excluding grazing).	Details. £ s. d.	Total. £ s. d.
Home grown fodder :—		
2 tons hay @ £7, 1 ton straw @ £2	16 0 0	
Roots, 25 tons Mangolds @ 25*s.* ton	31 5 0	
Oats, 220 bushels @ 48*s.* per qr. ...	66 0 0	
Purchased foods :—		
Cake and meal, 4 lbs. per head per day	204 15 0	
Brewers' grains	110 10 0	
Pastures, 40 acres of pasture @ 36*s.* per acre—proportion	72 0 0	
		500 10 0
Aftermath. 16 acres at 15*s.* per acre ...		12 0 0
Labour.		
5 milkers @ 3*s.* 8*d.* per day	65 0 0	
1 cowman (part time) 3*s.* per day ...	27 6 0	
1 girl cleaning dairy utensils @ 2*s.* per day	18 4 0	
		110 10 0
Depreciation.		
5 cows sold, 1 died. 6 bought. Difference		130 0 0
General Expenses.		
Rent	8 5 0	
Rates	1 16 0	
Depreciation of Machinery	6 0 0	
Renewals	5 0 0	
Coal, Oil, etc.	2 8 0	
		23 9 0
Interest on Capital.		
5 per cent. on £1,400 (22 weeks) ...		29 12 2
Management @ 40*s.* per week (22 weeks)		44 0 0
Delivery to station		22 15 0
		872 16 2
Credit. 23 calves sold		25 0 0
Total		£847 16 2

Total yield of milk 16,380 galls. Average yield per cow 2¼ galls.

Average cost per gallon 1*s.* 0½*d.*

Number of cows in herd 40. Number of cows in milk 35.

SECOND PERIOD. 1st Nov., 1918, to 30th April, 1919.

Foods (home grown).	£ s. d.	£ s. d.
15 cwts. of hay per cow @ £8 per ton (40 cows)	240 0 0	
15 cwts. of straw per cow @ £2 per ton (40 cows)	60 0 0	
Roots.		
95 tons of mangolds and swedes @ 25*s.* per ton	118 15 0	
3 acres cabbages, 4 acres white turnips	93 0 0	
Oats. 680 bushels @ 48*s.* per qr. plus crushing	210 0 0	
		721 15 0
Purchased Foods.		
Cake and meal, 6 lbs. per head per day	254 0 0	
Brewers' grains	122 0 0	
		376 0 0
Pasture. 40 acres at 2*s.* 3*d.* per acre, proportion		2 10 0
Labour.		
5 milkers @ 1*s.* 8*d.* per day	65 0 0	
1 cowman, full time	57 0 0	
1 girl cleaning cans, etc.	20 5 0	
		142 5 0
Depreciation. 2 cows sold for £21 } 4 „ „ fat } difference ... 6 „ bought		128 5 0
General Expenses.		
Coal, oil, water, etc.	6 12 0	
Rent	8 5 0	
Rates	1 16 0	
Depreciation of Machinery	6 0 0	
Renewals and Repairs	5 0 0	
		27 13 0
Interest on Capital. 5 per cent. on £1,400, 30 weeks		40 7 10
Management @ 40*s.* per week for 30 weeks		60 0 0
Delivery to station		22 15 0
		1,521 10 10
Credit. 19 Calves sold		35 0 0
Total		£1,486 10 10

Total yield of milk ... 13,740 gallons

Average yield per cow... 1¼ „

	s. *d.*
Cost per gallon ...	2 2
Less manurial value ...	1
Net cost per gallon ...	2 1

Number of cows in herd, 40. Number of cows in milk, 35.

FARM No. 26.

County, ESSEX.

Size of Farm : 1,130 acres, all arable except 100 acres woodland
Soil : Very heavy, poor, clayland.
System of Farming : Cropping, including hay growing, etc.
No. of Acres on which estimate based, about 200.

COST PER ACRE OF BARE FALLOWING (1918 prices).

Horse Labour. Cost of horse, per working day put at 6*s.* 6*d.* Man, 6*s.* per day.

	£ s. d.	£ s. d.
Ploughing, 3 horses ¾ acre per day ...		1 14 0
Cross " " " " ...		1 14 0
" " 1 " " ...		1 5 6
Crab harrowing twice, 4 horses, 8 acres per day		9 6
Ploughing, 2 horses, 1 acre per day ...		19 0
" " " " ...		19 0
Marking off, equal to ½ ploughing ...		4 9
Water furrowing		11 0
Use of Implements		3 0
Rent		6 0
Rates		2 6
General Expenses		7 6
Interest on capital @ 5 % per annum ...		8 9
Management...		5 0
Total Cost		£9 9 6

Charge ½ to wheat ... £4 14 9
" ⅜ to beans, etc.
" ⅛ to wheat

WHEAT No. 16.

COST OF PRODUCTION PER ACRE, 1918 CROP.

	£ s. d.	£ s. d.
Bare Fallowing. Share		4 14 9
Rent		6 0
Rates		2 6
Manure.		
15 tons dung @ 10*s.* 4*d.* (charge half)		3 17 6
(Cost 2*s.* 6*d.* per ton on rail.		
3*s.* 10*d.* " rail. carr.		
2*s.* " cartage.		
2*s.* " application.)		
1 cwt. sulphate/ammonia applied ...		1 0 0
Seed. 2 bush. @ 12*s.* per bush. plus dressing		1 4 6
Cultivations.		
Two harrowings, 2 horses, 8 acres per day	4 9	
Drilling, 2 men, 4 horses, 8 acres per day	4 9	
One harrowing, 2 horses, 8 acres per day	2 4	
Water furrows	3 0	
Ploughing headlands	2 0	
Cleaning out water furrows	11 0	
Two horse hoeings and 1 harrowing 8 acres	7 0	
Rolling	2 4	
Thistle cutting and docking	5 0	
	2 2 2	
Harvesting		1 15 6
Threshing		1 1 6
Carting to station		3 0
Implements		5 0
Liming.		
3 tons ground-lime @ £1 12*s.* 6*d.* ...	4 17 6	
Application	15 0	
	5 12 6	
Charge ⅛th ...		1 2 6
Draining.		
Mole £1 15 0 per acre.		
1 0 0 " for leads.		
£2 15 0 Charge ⅛th ...		4 7
General Expenses, including ditching ...		7 0
Interest on Capital, 5 %		18 0
Management...		10 0
Total Cost		£19 14 6

Average yield—24 bush. grain, 20 cwts. straw.

NOTE.—This is interesting as an example of the expense involved in bringing more or less derelict and intractable clays into cultivation. Where the costing is done on conventional lines, profitable wheat growing is impossible, but the fact is that other crops such as peas and hay often yield very well, due largely to the cultivations spent on wheat.

FARM No. 27.

County, NORFOLK.

Size of Farm : 317 acres. 240 acres arable, 77 acres pasture.
Soil : Medium to fairly heavy.
System of Farming : Corn growing and Meat productio
Normally four course.

BARLEY No. 10.

AVERAGE COST PER ACRE OF 1918 CROP.

Horse Labour. Net cost per working day put at 6*s.* 9*d.* per hors
Average cost of man, 6*s.* per day inclusive.

	£ s. d.	£ s.
Rent		1 10
Rates		6
Manure.		
3 cwts. supers @ 6*s.* 3*d.*...	18 9	
¾ " sulphate of ammonia @ 17*s.* ...	12 9	
Carting and application...	4 0	
		1 15
Seed. Average of 4 bush. per acre @ 10*s.* (mostly new seed)		2 0
Cultivations.		
1 ploughing, 2 horses, 1 acre per day ...	19 6	
2 " double furrow, 3 horses, 2 acres per day	1 6 3	
3 harrowings, 3 horses, 14 acres per day	5 9	
Rolling ... 1 horse, 10 " "	1 2	
Drilling ... 2 horses, 9 " "	2 2	
2 harrowings, 2 " 10 " "	3 10	
Rolling ... 3 " 10 " "	2 0	
Weeding, thistles, docks, etc.	1 0 0	
		4 0
Harvesting. Man labour per contract ...	1 0 0	
String, £5 per cwt.	3 6	
Horse labour—cutting, 6 horses, 10 acres	4 2	
Carting, 6 horses, 10 acres per day ...	4 2	
Straw, pegs, etc., for thatching, and water	3 0	
Second raking, horse	6	
		1 15
Threshing. 10 coombs per acre. 10 acres per day, 12 men and 1 boy and 3 horses, plus hire machine	18 0	
Coals and carting, ½ ton @ £2 ...	2 0	
		1 0
Dressing @ 5*d.* per coomb...		4
Carting to station. 2 loads per day, 3-4 miles		5
Use of machinery and implements ...		10
Broken time. About 10 % on labour ...		13
Hedging, ditching, fencing and general expenses		5
Interest on Capital, 5 % on outlay for 6 months		7
Management. Bailiff, 7*s.* 6*d.*, farmer, 7*s.* 6*d.*		15
		£15 8

Average crop—40-44 bush. grain, 22-23 cwts. straw.

NOTE.—Where barley is grown after sheep on roots, the charg for proportion sheep folding would be about 50*s.* per acre, but t crop would be slightly better. No manures would be necessary.

FARM No. 28.

County, HANTS.

Size of Farm : 750 acres arable (101 acres wheat), 350 acr pasture, 533 acres down.
Soil : From heavy clay to light down.
System of Farming : Cropping and sheep.

WHEAT No. 17.

COST PER ACRE OF 1918 CROP on various classes of Land.

	Heavy land. £ s. d.	Medium do. £ s. d.	Light £ s.
Rent and Rates	1 15 0	1 10 0	1 2
⅓ cost of fallowing and liming	3 0 0	2 0 0	1 15
Ploughing and pressing ...	2 17 0	1 12 6	1 7
Drilling	3 6	3 6	3
Harrowing (1/6)	6 0	6 0	4
Dung, 20 loads @ 2*s.* 6*d.* (labour only)	2 10 0	2 10 0	2 10
Seeds	1 0 0	1 0 0	1 0
Trimming, furrowing, etc. ...	5 0	3 0	2
Artificial manure	1 2 0	1 2 0	1 2
Harrow (Spring)	3 0	3 0	1
Roll "	1 6	1 6	1
Weeding	4 0	4 0	4
Binding and shocking	15 0	15 0	12
Carting and stacking	12 0	12 0	10
Threshing	1 0 0	1 0 0	17
Thatching	4 0	4 0	4
Delivery	5 0	5 0	5
	£16 3 0	£13 11 6	£12 8

Straw put against manure.
Average yield, 1919 crop 25 bush. grain, 18 cwts. straw.
" over 5 years, 28 " 25 "

FARM No. 29.

County, ESSEX.

Size of Farm : 600 acres. Arable 300 acres. Pasture 500 acres.
Soil. Typical "Three Horse Land."
System of Farming. Corn growing and Milk Production.
Number of Horses to which estimate applies. 14.

HORSE LABOUR No. 11.

AVERAGE COST OF KEEPING EACH HORSE FOR 1918–19.

	£ s. d.	£ s. d.
Foods.		
2 bush. oats per week, all year round, @ 48*s.* per quarter	31 4 0	
20 lbs. hay per day—1st October to 12th May—@ £7 15*s.* per ton ...	15 10 0	
8 lbs. Straw Chaff per day, all year round, @ 40*s.* per ton...	2 12 0	
Grass, 2 acres @ 48*s.* per acre	4 16 0	
		54 2 0
Shoes and Shoeing.		
6 new sets @ 8*s.*	2 8 0	
Removals, &c.	10 0	
		2 18 0
Harness		1 10 0
Stable Equipment		10 0
Veterinary. Attendance and Medicines...		1 0 0
Stable. Rent, rates and repairs		15 0
General expenses including supervision...		10 0
Depreciation. 10% on average value £80		8 0 0
Interest on Capital. 5%		4 0 0
		£73 5 0

Cost of litter put against manure.
Average No. of working days per annum ... 240
Average cost of one horse per working day... 6*s.* 1*d.*
Average cost of horseman ... 6*s.* per day (inclusive).
(For 52 hours week.)

Cost of Pasture—thus :	£ s. d.
Rent	1 2 0
Rates	4 0
2 cwts. slag	8 0
Thistle cutting	3 0
Ditching	5 0
Fencing (rails, &c.)	5 0
General expenses...	1 0
	£2 8 0

WHEAT No. 18.

No. of acres on which estimate based, 35.
Previous Crop. Beans.

COST OF PRODUCTION PER ACRE OF 1918 CROP.

	£ s. d.	£ s. d.
Rent		18 0
Rates		4 0
Manure.		
2 cwts. sulphate of ammonia applied...		2 0 0
On Beans, 15 tons dung @ 6*s.*	4 10 0	
Application 1*s.*	15 0	
	5 5 0	
Charge ⅓ths ...		1 19 4
Seed, 2 to 2½ bush. @ 95*s.* per qr. (all bought) and dressing		1 4 6
Cultivation.		
Ploughing, 2 horses, ¾ acre per day ...	1 4 0	
4 Harrowings, „ 10 „ „ ...	6 0	
Drilling, 3 men 4 horses 10 acre per day	4 0	
Water furrows	2 0	
Striking up, man and horse	1 2	
Harrowing in Spring	1 6	
Rolling, 2 horses. 10 acres per day ..	1 6	
Hand hoeing and dock pulling ...	12 6	
		2 12 8
Harvesting.		
Cutting, self-binding and stooking ...	16 6	
Carting and stacking	15 0	
Thatching, straw pegs and twine ...	4 0	
		1 15 6
Threshing, including coals		1 1 6
Carting to station, average 3 miles ...		3 0
Implements and Machinery		5 0
Share of General Expenses		5 0
Broken time and unremunerative work...		10 0
Interest on Capital 5%		6 6
Management...		15 0
Total Cost		£14 0 0

Average yield, 24 bush. grain.
20 cwt. straw.

MILK No. 6.

System of Dairying. A herd of about 60 cows is kept, about 45 regularly in milk with a view to maintaining as uniform a supply as possible.

COST OF PRODUCTION PER GAL. DURING 1918–19.

Nature of Expenditure.	PERIOD 1918. 1st May to 30th Sept. 1918. Details.	Totals.	1st October to 30th April, 1919. Details.	Totals.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Foods. Purchased cake and meal ...	120 0 0		168 16 3	
Grains — damaged barley and beans	100 0 0		156 0 0	
Hay and straw ...	—		977 12 9	
Green forage—vetches	60 0 0		—	
Roots	—		176 11 3	
Pasture and aftermath	250 0 0		70 0 0	
		530 0 0		1,549 0 3
Labour. (App. 1)*...		187 0 0		261 14 0
Depreciation and Loss on cows (App. 2)†		140 0 0		120 0 0
General Expenses.				
Rent and rates ...	10 0 0		14 0 0	
Machinery and utensils	15 0 0		14 16 0	
Veterinary expenses	5 0 0		3 0 0	
Miscellaneous (App. 3)§ ...			6 1 6	
Keep of bull ...	26 8 0		36 17 6	
		56 8 0		74 15 0
Delivery (App. 4)ϕ ...		25 0 0		35 17 6
Interest, 5% on £2,100		50 0 0		69 12 0
Management... ...		40 0 0		56 0 0
Total cost ...		£1,028 8 0		£2,166 18 9
Deduct 20 calves @ £2		40 0 0		
35 calves @ £2...				70 0 0
Net Cost ...		£988 8 0		£2,096 18 9
Total Milk produced			14,252 gals.	13,542 gals.
Cost per gallon			1*s.* 4½*d.*	3*s.* 1½*d.*
Less manurial value			—	2½*d.*
Net cost per gallon ...			1*s.* 4½*d.*	2*s.* 11½*d.*

*App. (1). Labour from 1st October to 30th April, 1918–19.

	£ s. d.
Foreman, wages and extras	2 14 0
2 cowmen „ „	2 1 0 each.
1 girl	1 10 0
1 man, horse and cart, carting hay ...	11 0
	£8 17 0 per week.

Labour per week in summer period slightly less.

†App. (2). Loss on Cows.
1st May to 30th September. 1 broke thigh, £20 ; 1 broken neck, £39 ; 1 waster, £22 ; 1 died, £38 ; 2 sold (barren), £21. Total, £140,
1st October to 30th April. 12 abortions.

§App. (3). Miscellaneous. Coals, £1 ; oil, £1 2*s.* 6*d.*; coats and aprons, £1 14*s.* ; towels and soap, 5*s.* ; disinfectants and drenches, £2.

ϕApp. (4). Carting to Station. Horse and cart deliver twice daily—4 miles, upkeep of churns, seals, etc.

Home Grown Foods used.

	£ s. d
1st October to 31st January, 1919—	
58 tons 7 cwts. hay @ £7 15*s.*	452 4 3
87 „ 15 „ mangels @ £1 5*s.*	109 13 9
20 „ 5 „ chaff @ £4	81 0 0
1st February to 30th April, 1919—	
53 tons 10 cwts. mangels @ £1 5*s.*	66 17 6
19 „ 1½ „ chaff @ £4	76 6 0
47 „ 10 „ hay @ £7 15*s.*	368 2 6
	£1,154 4 0

Purchased foods consisted chiefly of linseed, cocoanut and dairy cake and meal.

Ration varied from time to time, but above is an accurate record of total quantities consumed.

FARM No. 30.

County, DORSET.

Size of Farm: 800 acres arable, 250 acres pasture, 300 acres down. Soil: Light loam on chalk.
System of farming: Corn, sheep, and milk production.

HORSE LABOUR No 12.

COST OF HORSE LABOUR FOR YEAR 1918 19.

I. Feeding.	£	s.	d.	£	s.	d.
(*a*) Summer 6 months. Per horse.						
1½ bus. Oats @ 6*s.* bus. for 26 weeks	11	14	3			
Chaff @ 2*s.* per week	2	12	0			
Grass-feed @ 6*s.* per week	7	16	0			
(*b*) Winter 6 months.						
3 bus. Oats @ 6*s.* 6*d.* bus.	25	7	0			
Chaff @ 4*s.* per week	5	4	0			
Bran @ 1*s.* 6*d.* per week	1	19	0			
Mangolds @ 4*s.* per week	5	4	0			
				59	16	0
II. Other Costs.						
(1) Shoeing.						
4 sets New Shoes per horse per annum @ 9*s.*	1	16	0			
Present price (10*s.* set), pre-war (4*s.* set).						
Removes		10	0			
(2) Harness. Repairs per annum ...	1	0	0			
Present cost of set (£12), pre-war (£5).						
(3) Stable utensils (brushes, oil, etc.)		7	6			
(4) Veterinary. Medicines and powders		15	0			
(5) Depreciation. 2 Colts @ £80, divided between 20 horses	8	0	0			
(6) Share of Rent, Rates, Insurance, etc.	1	5	0			
(7) Interest on Capital.						
Value horses, colts, etc. (28), £1,600; Ditto harness and equipment £150; 5 % on	3	2	6			
				16	16	0
Estimated cost of Litter	3	0	0			
Estimated value of Manure	1	10	0			
				1	10	0
				£78	2	0

Average of working days—290.
No. of horses—20 working cart horses.
Inclusive wages of horsemen, £2 5*s.*
Average No. of hours per week (Summer and Winter), 50 hrs.
Cost per working day for one horse—5*s.* 5*d.*

WHEAT No. 19.

COST PER ACRE OF GROWING WHEAT, 1918 CROP.

No. of acres, 150. Soil, light loam; sub-soil, chalk.
Season, good; wet before harvest, causing some waste of yield.
Crops of previous 3 years, wheat, clover, hay.

	£	s.	d.	£	s.	d.
Average Rent				1	5	0
Rates @ 5*s.* in the £					6	3
Farmyard manure.						
15 Loads @ 2*s.* 6*d.*—labour only ...				1	17	6
Seed. 2½ bushels @ 10*s.*				1	5	0
Cultivation.						
Steam ploughing and pressing... ...		18	0			
Coal—3 cwt. @ 2*s.* 6*d.*, hauling 6*d.* ...		8	0			
Harrowing twice, 3 horses, 9 acres per day		6	0			
Hauling water to engines, 3 horses ...		3	6			
Dix harrowing, 3 horses, 7 acres per day		3	6			
Dragging (heavy), 4 horses, 9 acres per day		5	0			
Drilling, 3 horses, 9 acres per day ...		4	0			
Rolling (heavy), 3 horses, 10 acres per day		4	0			
Harrowing, 2 horses, 10 acres per day		2	0			
Harrowing, in Spring, 2 horses, 10 acres per day		2	0			
Rolling, in Spring, 3 horses, 9 acres per day		3	0			
				2	19	0
Harvesting.						
Opening field		1	0			
Binder, 3 horses, 12 acres per day ...		6	0			
Twine and oil		5	0			
Hiling		1	6			
Hauling, 10 acres per day, 3 one-horse wagons, 6 men and 2 boys—horses 8*s.* each, men 9*s.*, boys 3*s.* 6*d.* ...		8	8			
Thatching, 10 acres in 1 rick, 13 sq. @ 1*s.*		1	3			
Thatch-making and spars		1	6			
				1	5	11
Threshing.						
@ 1 Rick per day. Hire of machine @ £3 per day		6	0			
Coal, 2*s.*; 9 men @ 7*s.*, £3 3*s.* a day ...		8	4			
				14	4	
Carried forward ...				9	13	0

	£	s.	d.	£	s.	d.
Brought forward ...				9	13	0
Marketing.						
Dressing and weighing		1	0			
Hire of sacks		0	8			
Hauling to market, 4 miles		8	0			
				0	9	8
Implements and Machinery—depreciation and repairs		9	0			
				0	9	0
General Expenses.						
Fencing, weeding, etc.		2	0			
1 cwt. Sulphate of Ammonia, 16*s.* 6*d.* plus application		18	6			
				1	0	6
Proportion of Cost of Cleaning. (After 2 years)	1	5	0			
				1	5	0
Allowance for Management					15	0
Interest @ 5 % per annum					13	0
Total Cost				£14	5	0

(Straw against manure.)
Yield, 34 bushels per acre.
Average yield over 7 years, 28 bushels per acre.

BARLEY No 10.

COST OF GROWING (SPRING) BARLEY, 1918 CROP.

No. of acres of barley, 40 acres.
Soil, light loam; sub-soil, chalk.
Previous crops—wheat, catch-crops and roots.

	£	s.	d.	£	s.	d.
Average Rent, £1 5*s.*; Rates @ 5*s.* in the £, 6*s.* 3*d.*				1	11	3
Barley manure, plus application ...				1	15	0
Value of Sheep manure after roots ...				1	10	0
Seed. 3 bushels @ 9*s.* 6*d.*				1	8	6
Cultivation.						
Ploughing twice, double ploughs, 3 horses, 1½ acres a day...	1	10	0			
Dragging, 3 horses, 8 acres a day ...		4	0			
Rolling, 3 horses, 9 acres a day ...		4	0			
Harrowing, 2 horses, 9 acres a day ...		2	6			
Drilling, 3 horses, 9 acres a day ...		4	0			
Harrowing, 2 horses, 10 acres a day ...		2	0			
Rolling in Spring, 3 horses, 9 acres a day		3	0			
				2	9	6
Harvesting.						
Opening field		1	0			
Binder, 3 horses, 12 acres a day ...		6	0			
Twine and oil		5	0			
Hiling		2	0			
Hauling, 12 acres per day, 3 one-horse wagons, 6 men and 2 boys; horses 8*s.* each, men 9*s.*, boys 3*s.* 6*d.* ...		7	4			
Thatching, @ 1*s.* sq.		1	3			
Threshing.						
@ 1 Rick per day. Hire of machine @ £3 per day		6	0			
Coal, 2*s.*; 9 men @ 7*s.*, £3 3*s.* a day ...		8	4			
Marketing.						
Dressing and weighing 1*s.*; hire of sks., 9*d.*		1	9			
Hauling to market, 4 miles		8	0			
Use of Implements, etc.		9	0			
General Expenses.						
Fencing, weeding, bird-scaring ...		4	0			
Proportion of cost of cleaning	1	0	0			
				3	19	8
Interest on average Outlay					12	7
Allowance for Management					5	0
				£13	11	6

(Straw against manure.)
Yield per acre, 36 bushels
Average yield, 7 years—28 bushels barley.

MANGOLDS No. 3.

COST OF GROWING MANGOLDS PER ACRE, 1918 CROP.

No. of acres, 14. Soil, flinty loam; sub-soil chalk.
Fairly good crop, Plant irregular, owing to Spring weather being too dry for germination.
Previous crops—clover, wheat, swedes.

	£	s.	d.	£	s.	d.
Rent, £2; Rates 10*s.*				2	10	0
Farmyard manure.						
18 Loads @ 4*s.* (labour only)				3	12	0
Artificial manures.						
5 cwt. Mangold manure	3	0	0			
Kainit or Salt, 4 cwt.		11	0			
Sulphate of Ammonia, ¾ cwt.		12	3			
				4	3	3
Carried forward				10	5	3

Farm No. 30—*continued.*

	£ s. d.	£ s. d.
Brought forward		10 5 3
eed. 8 lbs @ 2s. 9d. lb.		1 2 0
ultivation.		
Ploughing in farmyard manure (January and February); single ploughs, 2 horses, ¾ acre a day	1 5 0	
Cultivating twice, 3 horses, 8 acres a day	6 6	
Dragging twice, 3 horses, 8 acres a day	6 6	
Rolling, 3 horses, 8 acres a day ...	3 3	
Drilling (with manure drill), 3 horses, 6 acres a day	5 0	
Hauling, mixing, and bagging manure	3 3	
Harrowing, 2 horses, 8 acres a day ...	2 2	
Horse-hoeing twice	12 0	
Singling and flat-hoeing	1 10 0	
Horse-hoeing once	6 0	
		4 19 8
ifting.		
Topping and tailing	18 0	
Loading and pitting (manual labour)	1 5 0	
6 Horses and carts @ 6s. 6d., 5 boy drivers @ 2s. 6d. (2 acres a day)	1 5 9	
		3 8 9
mplements—depreciation		1 0 0
eneral Expenses.		
Hedging, etc.	5 0	
nterest on Outlay @ 5%	12 6	
llowance for Management	1 10 0	
		£23 3 2
Less, proportion cleaning costs		1 0 0
		£22 3 2

Average yield, 25 tons per acre. Average yield 7 years, 20 tons.

AY No. 10.

COST PER ACRE OF HAY, 1918 CROP.

Kind of Hay—Clover, Rye grass and small seeds mixture.
ne year hay. One year for sheep grazing.
ature of soil, light loam and chalk. No. of acres, 60.

		£ s. d.
ent, £1 5s.; Rates, 6s. per acre		1 11 0
ost of seeds for 60 acres—£85 6s. 1d. ...	(per acre)	1 8 3
Quantities—		
8 Bales Italian Rye grass @ £5 10s. bale.		
16 Bush. Devon Imperial @ £3 2s. 6d. quarter.		
224 lbs. Milled Sanfoin @ 7d. lb.		
300 lbs. Clover @ 10d. lb.		
130 lbs. Hop @ 4½d. lb.		
224 lbs. Broad Clover @ 9d. lb.		
5 Sacks English Sanfoin @ 36s. sack.		
owing, rolling and harrowing	(per acre)	10 0
utting (2-horse machine, 6 acres a day); horses 7s. 6d. each, men 7s.	(per acre)	4 0
urning, pooking, loading, stacking		15 0
hatching. 2s.; Thatch and spars, 5s.		7 0
roken time...		12 6
ear and tear of implements		2 6
nterest on average outlay		5 0
llowance for Management		15 0
		£6 10 8

Yield per acre, about 22 cwt. Average yield, 25 cwt.

HEEP No. 4.

SHEEP ACCOUNT FROM MICHAELMAS, 1918, TO MICHAELMAS, 1919.

	£ s. d.	£ s. d.
aluation of Sheep Stock—Michaelmas, 1918.		
640 Breeding Ewes @ 80s.	2,560 0 0	
250 Ewe Lambs @ 45s.	562 0 0	
10 Rams @ 120s.	60 0 0	
200 Grazing Lambs @ 55s.	550 0 0	
About 100 doz. hurdles @ 15s.... ...	75 0 0	
	£3,807 0 0	
oods—Michaelmas, 1918, to Michaelmas, 1919.		
300 acres Down @ 10s.	150 0 0	
Rates at 5s. in £	37 10 0	
168 acres Swedes, Turnips, Kale, Rape @ £4 per acre	672 2 0	
58 acres Vetches @ £5 16s. 8d. acre ...	336 8 0	
18 acres Rye and Winter Barley @ £4 18s. acre	88 4 0	
60 acres Aftermath Clover at 15s. acre	45 0 0	
40 tons Hay @ £8 ton	320 0 0	
15 tons Straw (lambing yard, etc.) @ 30s. ton	22 10 0	
44¼ tons Cake, Grains, Peas, Beans, etc., average cost £14 7s. 6d. ton	632 10 0	
75 qrs. Oats @ 50s.	182 10 0	
		2,486 12 0
abour.		
3 Shepherds, 6 months, @ 36s. week ...	145 8 0	
3 Shepherds, 6 months, @ 42s. 6d. week	165 15 0	
Extra for lambing and Summer money @ £7 each	21 0 0	
Carried forward		£2,486 12 0

	£ s. d.	£ s. d.
Brought forward		2,486 12 0
3 tons Coal allowed @ 45s. ton ...	6 15 0	
Extra Labour.		
(1) Hauling hurdles, etc., hauling, cracking, mixing cake, etc., estimated average £3 a week ...	156 0 0	
(2) Help during lambing, putting up yards	35 0 0	
Shearing and Dipping 1,100 sheep	25 0 0	
		554 18 0
Hurdles.		
60 doz. @ 22s. doz.	66 0 0	
Dressing same with Creosote @ 5s. doz.	15 0 0	
4 doz. Cribs @ 28s. doz., £5 12s.; and 18 Troughs, £16 4s.	21 16 0	
		102 16 0
Sheep purchased.		
20 Six-tooth Ewes @ 82s.	82 0 0	
2 Ram Lambs @ £9 9s.	18 18 0	
		100 18 0
General Expenses.		
1,104 Sheep dipped at 1d.	4 17 0	
Medicines, maggot dressing, marking, etc.	5 0 0	
		9 17 0
Interest.		
5% on 1918 Valuation, £3,807... ...	190 7 0	
5% on Year's Outlay, £3,907 0s. 9d. for 6 months	97 13 0	
		288 0 0
Management. @ 30s. week		78 0 0
Total Costs		£3,621 1 0
Credits.		
Sheep and lambs *sold*	1,834 19 0	
Wool. Washed fleeces @ 50d. Unwashed lamb wool at 36d. Estimated	800 0 0	
Manurial value, say	200 0 0	
		2,834 19 0
Deficit		£786 2 0

Valuation at Michaelmas, 1919.
Approximately the same as Michaelmas, 1918—£3,807.

[NOTE—It is difficult to assess the manurial value in this and in similar cases, but if the account is to be squared it means that a charge of £986 2s. must be carried by succeeding corn crops, in addition to the proportion of cost of growing roots which would be at least £5 per acre, *i.e.*, £840.—J.W.]

MILK No. 7.

COST OF PRODUCTION OF MILK, MAY TO SEPT., 1918.

	£ s. d.	£ s. d.
No. of Cows, 50. Average value, £42.		
I. Foods.		
Exclusively on grass.		
30 acres pasture @ £1 acre for May. (Note.—This field was not stocked with any stock after Dec. 1st, 1917)		30 0 0
84 acres from June 1st to Sept. 30th @ £2 acre		168 0 0
40 acres in addition to above after hay had been cleared @ £1 10s. acre ...		60 0 0
II. Labour.		
1 Dairyman, full time @ (per week)...	1 15 0	
Sundays	4 3	
Milk allowance, 1 pint daily	1 2	
3 men milkers, part-time, @ 25s. week	3 15 0	
Sundays @ 4s. 3d.	12 9	
Milk allowance, 1 pint daily	3 6	
1 Girl milker, full time, @ (per week)	1 4 0	
Sundays...	4 0	
Milk allowance, 1 pint daily	1 2	
	8 0 10	
Less Rent of 2 cottages @ 2s.	4 0	
22¼ weeks @ (per week)	7 16 10	
		176 8 9
III. Depreciation.		
46 Cows @ £42 (beginning of period)	1932 0 0	
6 Heifers @ £35	210 0 0	
48 Cows @ £37 (end) ... £1776 0 0	2142 0 0	
4 Cows sold 152 15 0	1928 15 0	
		213 5 0
IV. General Expenses.		
Share of Rent and Rates on Buildings	25 0 0	
Coal, Petrol, and Lubricating Oil ...	10 0 0	
Veterinary and Medicines	4 10 0	
Depreciation on Utensils and Water Supply @ 5 % per annum on £500 for 5 months	10 8 4	
Insurance	3 0 0	
Keep of Bull @ 10s. week	11 5 0	
Share of general farm expenses (hedging, etc.)	20 0 0	
		84 3 4
Carried forward ...		£731 17 1

Farm No. 30—*continued*

	£	s.	d.
Brought forward	731	17	1
V. Delivery.	£	s.	d.
Horse and float @ £1 week	22	10	0
Driver's journeys—Week-days, 1/-; Sundays, 2/-	10	12	0
	23	2	0
VI. Interest on Capital.			
5% per annum on £2,642 for 5 months	55	0	10
VII. Management Allowance.			
@ £1 a week	22	10	0
	832	9	11
No manural value on grass.			
Value of Calves	43	6	0
	£789	3	11

Milk produced—14,982 gallons.
Net Cost per gallon—1/0¾.

COST OF PRODUCTION OF MILK FROM OCT. 1st, 1918 TO APRIL 30th, 1919.

No. of Cows, 50. Value (average), £37.

	£	s.	d.	£	s.	d.
I. Foods.						
Pasturage during Oct., Nov., Dec., 124 acres @ 10/- acre				62	0	0
2 acres Cabbage fed in field. Cost of cultivation, growing, cutting and hauling				51	0	0
8 acres Mangolds fed in house. Cost of cultivation, growing, hauling and pulping				189	5	4
Chaff, including cost of cutting and hauling (20 tons @ 30/- for straw)				62	4	0
Hay, 40 tons @ £8 a ton				320	0	0
Barley Straw, 15 tons @ 25/- a ton				18	15	0
Oat Straw, 20 tons @ 30/- a ton				30	0	0
Crushed Oats, 1 sack daily for 5 months @ 25/- per sack				187	10	0
Cakes and Meals, 19 tons 1 cwt. Average price £16 a ton				304	16	0
Bran, 4 tons @ £12 a ton				48	0	0
				£1,273	10	4
II. Labour.	£	s.	d.			
3 Men full time @ 35/- (per week) ...	5	5	0			
Sundays 4/3 each		12	9			
Milk allowance, 1 pint each daily ...		5	3			
2 Girls full time @ 22/- (per week) ...	2	4	0			
Sundays 4/- each		8	0			
Milk allowance, 1 pint each daily ...		3	6			
29½ weeks @ (per week)	8	18	6			
				263	5	9
III. Depreciation.						
48 Cows at £42 (end of period) ...	2,016	0	0			
Cows sold	98	1	8			
	2,114	1	8			
48 Cows @ £37 (beginning) £1,776 ...	1,776	0	0			
	£338	1	8			
IV. General Expenses.						
Share of Rent and Rates	35	0	0			
Coal, Petrol, Oil and Candles	17	0	0			
Veterinary and Medicines	7	0	0			
Depreciation of Utensils, 5 % on £500 for 7 months	14	11	8			
Insurance	4	4	0			
Farm Expenses—hedging, fencing, rolling, etc.	70	0	0			
Keep of Bull @ £1 a week	29	10	0			
				177	5	8
V. Delivery.						
Horse and float @ 30/- week; lights, etc. (£1); Driver, week-days 1/-; Sundays 2/-	57	5	0			
				57	5	0
VI. Interest on Capital.						
£2,276 @ 5% per annum for 7 months	66	7	8			
				66	7	8
VII. Management Allowance.						
@ 30/- for 29½ weeks	44	5	0			
				44	5	0
				1,881	19	5
Value of Calves	31	6	0			
Appreciation of Cows (from No. III.)	338	1	8			
				369	7	8
				£1,512	11	9

Milk produced—13,975 gallons.

	s.	d.
Cost per gallon	2	2
Deduct Manurial Value ...	0	1½
Net Cost per gallon ...	2	0½

FARM No. 31.

County, LINCOLN.
Size of Farm. 250 acres.

Management expenses, £200, divided as follows:—	£	s.	d.
Arable land, 88 acres grass	158	10	0
75 beasts (wintered only)	37	10	0
8 horses	4	0	0
Total per annum	£200	0	0

Rent 21/- per acre; rental of buildings £46 5*s*. Beast yards used only in winter. Rent apportioned as follows:—

	£	s.	d.
8 horses at £1	8	0	0
75 beasts at 10/-	37	10	0
	45	10	0

BEEF No. 5.
WINTER STORES AND SUMMER FEEDING.
26 cattle cost in October £26 per head = £676.

October 24th, 1918, to May 1st, 1919.	£	s.	d.
130 tons straw and chaff at £1	130	0	0
6½ tons clover hay at £7 15*s*.	50	7	6
13 tons roots at 25/-	16	5	0
Labour—1 man and one-tenth did 75 beasts = 17/1 per week for the 26 × 27 weeks	23	1	3
1 man at 7/3 and 1 horse at 8/-¼ day three times a week leading litter to yard	15	8	3
Rent and rates of building at 10/- per head ...	13	0	0
Insurance of live stock at 5/- per £100 per annum...	1	2	6
Share of general expenses, including wear and tear, tumbrils, &c.	1	10	0
Management, bailiff and self	5	0	0
Interest on capital, 5 per cent. on 6 months outlay	22	10	0
	£278	4	6

May 1st to July 28th, 1919.	£	s.	d.
Grazing, 24 at £4	96	0	0
Cake and meal £237, charge two-thirds	158	0	0
Breaking 10 tons cake at 15/- per ton	7	10	0
Carting 10 tons cake from station at 5/-	2	10	0
Carting 10 tons cake to field at 5/-	2	10	0
Marketing expenses 1 man 1 day and dinner ...		10	0
Management	2	10	0
Interest on capital at 5 per cent. on outlay for 3 months	12	10	0
	£282	0	0

Total Costs.	£	s.	d.	Total Receipts.	£	s.	d.
Beasts	676	0	0	1 died	4	0	0
October to May 1st...	278	4	6	1 skin	1	0	0
May 1st to July 4th	282	0	0	24 at £41 15*s* ...	996	0	0
	£1,236	4	6	*and* 175 tons manure.			

∴ This manure has cost 26*s*. per ton to produce, if a level balance is to be shown and no loss accounted to the feeding.

County, LINCOLN. **FARM No. 32.**

	£	s.	d.
Size of Farm: 360 acres. 300 arable, 60 grass.			
8 horses, rent	8	0	0
61 cattle wintered	30	0	0
Rent of buildings used for stock and horses ...	£38	0	0

Management, bailiff and self, £250—

Cattle	£36	(winter 30, summer 6).
Horses	4	
Arable	210	
	£250	

BEEF No. 6.
WINTER FATTENING.
26 cattle cost on 1st October, 1918, £37 10*s*. each=£975.

Cost of feeding and bedding.	£	s.	d.
Litter—60 tons straw @ £1	60	0	0
44 tons clover hay @ £7 15*s*. (=about 18 lb. per head daily)	341	0	0
70 tons mangolds @ £1	70	0	0
16½ tons linseed cake @ £19 15*s*. on farm	320	18	9
4 tons 17¼ cwt. cotton cake @ £14 15*s*. on farm ...	71	18	1½
Labour—30 weeks @ 30*s*. per week	45	0	0
Rent of buildings	13	0	0
Insurance of live stock @ 5*s* per £100 per annum ...	1	5	0
Share of general expenses, including wear and tear of tumbrils, cake breakers, etc.	1	10	0
Management (winter period)	13	0	0
Interest on capital, 5 per cent. on 7¼ months outlay ...	44	0	0
	£981	11	10½

Total Costs.	£	s.	d.	Total Receipts.	£	s.	d.
Beasts	975	0	0	Sold in June, 1919.			
Expenses	981	11	10½	10 beasts @ £52	520	0	0
	£1,956	11	10½	15 beasts @ £51	575	0	0
Less one-third cake	131	0	0	1 dead (skin) ...	1	0	0
	£1,825	11	10½		£1,096	10	0
				and 221 tons manure.			

∴ To show a level balance the cost of this manure=78*s*. per ton.

FARM No. 33.

County, NORFOLK.

Size of Farm: 312 acres. 232 acres arable. 80 acres pasture.
Soil. Good medium.
System of Farming. Cropping and Meat Production. Four course.
Average number of Work Horses. 10.

HORSE LABOUR. No. 13.

AVERAGE COST OF KEEPING HORSE FOR 1918–19.

Foods. October to middle May.

	£ s. d.	£ s. d.
Daily Ration.		
14 lbs. crushed oats and bran @ £16 per ton	22 8 0	
14 lbs. long and 7 lbs. cut hay „ £7 15*s.* „	11 5 6	
7 lbs. cut straw „ £2 „	1 8 0	
14 lbs. roots „ £1 5*s.* „	1 15 0	
Mid. May to Sept.		
7 lbs. oats and bran, daily	7 0 0	
7 lbs. cut hay	3 7 10	
7 lbs. cut straw	17 6	
Grazing @ 5*s.* per week...	5 0 0	
		53 1 10
Shoes and Shoeing, 6 new sets @ 7*s.* 6*d.*	£2 5 0	
4 removes, &c. @ 4*s.* ...	16 0	
	3 1 0	
Harness, per quarterly accounts	3 0 0	
Stable Equipment	10 0	
Veterinary Attendance and Medicines ...	1 10 0	
Stable—Rent, rates and repairs	1 0 0	
General Expenses (including supervision)	10 0	
Depreciation—10% on average value £80	8 0 0	
Interest on capital 5% „ „	4 0 0	
		21 11 0
		£74 12 10

Cost of litter balanced by manure.

Working Days—Allow for Sundays, holidays, wet and frosty weather, idle days during hay time, harvest, threshing, &c., visits to smithy, sickness of man or horse, sore shoulders, man working only one horse, &c. Average No. 230.

Cost per working day ... 6*s.* 6*d.*

Average cost of horseman per day 6*s.* (inclusive).

FARM No. 34.

County, WORCESTER.

Size of Farm: 260 acres arable. 190 acres pasture.
Soil. Light, liable to "burn."
System of Farming. Cropping, feeding and milk production.
Previous Crop. Corn.
No. of acres. 42.
POTATOES. No. 7.

AVERAGE COST PER ACRE 1918 CROP.

	£ s. d.	£ s. d.
Rent		1 4 0
Rates		3 6
Manure.		
7 cwts. special potato manure @ 14*s.*...	4 18 0	
2 cwts. flue dust @ 3*s.* 6*d.*	7 0	
Carting and application...	3 6	
		5 8 6
Seed. Scotch, 1 ton @ £9 7*s.* per ton ...		9 7 0
Cultivations. (Horsemen @ 6*s.*, Horse @ 5*s.* 6*d.* per day.)		
1st Ploughing, 2 horses, ¼ acres per day	1 2 8	
2nd „ „ ¼ „	1 2 8	
3 Scufflings 3 „ 6 „	11 3	
4 Harrowings, 2 „ 9 „	8 6	
Gathering scutch and chain harrowing	16 6	
Ridging, 3 horses, 3 rowed, 6 ac. per day	2 10	
Splitting, 2 „ 1 „ 3 „	5 8	
Planting seed, women 4*s.*, carting 1*s.* 6*d.*	5 6	
Harrowing down twice, 10 ac. per day	3 5	
Moulding up twice, once 3 row and once 1 row	7 0	
Two horse hoeings, 1 horse, 3 acres ...	8 0	
Two drill harrowings	8 0	
Hand hoeing by contract	12 0	
		6 12 0
Carried forward ...		£22 15 0

	£ s. d.	£ s. d.
Brought forward		22 15 0
Harvesting.	£ s. d.	
Digger, 2 horses	17 0	
12 pickers @ 5*s.*	3 0 0	
3 horses, 2 men and boy with carts	1 13 0	
1 man at pit	6 0	
(Will do 1½ acres per day)	5 16 0	
Cost one acre	3 17 4	
Straw	10 0	
Two earthings up	8 6	
Harrowing, dragging and picking twice	14 0	
Marketing.		5 9 10
Dressing and bagging first ware and then seed, 6½ ton crop...	2 1 6	
Carting to station, 6 tons per day, man and 3 horses	1 2 6	
Allow for extra work in handling Scotch seed (purchased and laid down early) and in turning and dressing "once grown" seed		3 4 0
Use of Implements and Machinery ...		15 0
Allowance for broken time		15 0
General Expenses		15 6
Interest on capital, 5%		7 0
Management...		17 0
		1 5 0
Gross cost		£36 3 4

NOTE.—Any allowance necessary for cleaning costs carried forward is more than offset by the fact that the land is left poorer after the potato-crop, without dung, than it was before it. This tends to show a lower cost per ton than actually obtains.

Average yield—6½ tons ware and seed.

FARM No. 35.

County, E. YORK.

Size of Farm: 180 acres arable. 100 acres grass. Soil: Warp.
System of Farming. Cropping and Feeding and sale of crops.
POTATOES. No. 8.

AVERAGE COST PER ACRE OF 65 ACRES POTATOES, 1919 CROP.

NOTE.—Man and two horses taken at 25*s.* 5*d.* per day.	£ s. d.
Rent and Rates	2 0 0
1st Ploughing, 2″	1 5 5
2nd Ploughing, 5″	1 13 10
3rd Ploughing, 8″	1 13 10
Cultivating	10 0
Harrowing	7 6
Ridging	10 0
Manure, 25 tons @ 10*s.*, bought 8*s.* per ton, Railway Carriage, 2*s.*	12 10 0
Sulph. Ammonia, 1½ cwts.	1 4 0
Super Phosp., 4 cwts. 6*s.* 6*d.*	1 6 0
Lime, ½ ton	1 2 6
Carting and spreading Manure, 25 tons, 2 miles from Station, 5*s.* per ton	5 0 0
Carting, Tillage and Sowing	5 0
1 ton Scotch Seed	9 10 0
Carting and Piling down, finding Straw and covering	10 0
Carting and Planting Seed	16 0
Covering	10 0
Running up opposite way	10 0
Harrowing down	5 0
Running up	10 0
Harrowing down	5 0
Scarifying	12 6
Hoeing	15 0
Scarifying, 2nd time	12 6
Earthing up	7 6
Ploughing out	15 0
Gathering	3 0 0
Carting to Pit	10 0
Clamping and thin soiling	10 0
2nd Covering Soil	10 0
Straw, 5*s.*	10 0
Harrowing	2 0
Picking Harrowings	2 6
Carting off Tops	2 6
Dressing, 6½ tons, 5*s.*	1 12 6
Dressing Seed	7 6
Carting, 2½ miles, 6*s.*	1 19 0
Proportion, Hedging, Ditching, loss on Headlands, etc.	10 0
Interest on Capital	1 10 0
Management...	1 5 0
Establishment Charges	1 0 0
	58 17 7
Allowances off—	
1/3 Manures	£3 2 6
1/3 Super and Lime	16 0
Prop. cleaning	1 0 0
	4 18 6
Net cost	£53 19 1

Crops estimated to yield 5 tons ware, 1 ton seed, and ½ ton chats per acre.

Average crop in 1918, 6 tons ware, 1 ton seed, and ½ ton chats per acre.

FARM No. 36.

County, BERKS.

Size of Farm. 361½ acres arable. 250 acres pasture.
System of Farming. Cropping and feeding.

BEEF No. 7.

COST OF BEEF PRODUCTION, 1919.

No. of Bullocks 10. Date of Purchase. 13th February, 1919.
Date of Sale. 25th June, 1919.

AVERAGE COST PER HEAD.

	£	s.	d.
Purchase Price—about 10¼ cwts. @ 73/6	39	10	0
Marketing expenses and carriage		0	9
Foods—			
11 weeks in yards.			
Trough feed 6 lbs. per day @ 12/- per cwt. ...	2	9	6
Hay, 14½ lbs. per day @ 8/ per cwt.	4	0	0
Mangolds, 3 cwts. per week @ 25/- per cwt. ...	2	1	3
8 weeks at grass			
Grass @ 2/3 per week (low)		16	0
Cake, 6 lbs. per day @ £18 per ton	2	14	0
Labour, 1/- per week in yards, 2*d*. per week at grass ...		12	4
General Charges, including rent, &c.		2	6
Interest on capital		16	0
Management...		5	0
Cost ...	£53	7	4

Straw not charged, put against manure.
Average live weight when sold, 12¾ cwts.
Cost per cwt. L.W. 83/9.

NOTE.—These cattle were sold at 85/- and 86/- per L.Cwt. All throve well, and no allowance made for deaths and bad doers.

BEEF No. 8.

COST OF BEEF PRODUCTION 1919.

No. of Bullocks. 10. Date of Purchase 31st March, 1919.
Date of Sale. 27th August, 1919.

AVERAGE COST PER HEAD.

	£	s.	d.
Purchase price	10	0	0
Marketing expenses and carriage		3	0
Foods, 4 weeks in yards.			
Trough feed, 6 lbs. per day at 12/- per cwt.		17	6
Straw, 5 cwts., @ 30/- per ton		7	6
Mangolds, 3 cwts. per week @ 25/- per ton		15	0
Grass at 2/6 per week (low)	2	2	6
17 weeks at grass			
Cake, 6 lbs. per day for 6 weeks @ 18/- per cwt. ...	2	0	6
Labour, 1/- per week in yards, 2*d*. per week at grass ...		6	10
General charges, including rent, &c.		2	6
Interest on capital		19	6
Management...		5	0
	£47	19	10

Straw for litter against dung.
Average live weight when sold, 11 cwts. 2 qrs. 18 lbs.
Cost per cwt. L.W. 82/4.

NOTE.—Above cattle sold at 80/- per cwt. L.W. All throve well, and no allowance made for deaths and bad doers.

FARM No. 37.

County. GLOUCESTER.

Size of Farm : 300 acres arable.
300 pasture.
Soil : Medium, in rather poor condition.

WHEAT No. 20.

AVERAGE COST PER ACRE. WHEAT AFTER CLOVER.
60 ACRES. 1918 CROP.

	£	s.	d.	£	s.	d.
Residue from Clover				1	8	0
Rent, 16/6, Rates 2/8					19	2
Manures. 2 cwts. sulp. amm. applied ...				1	18	0
Seed. 2½ bushels @ 10/- and dressing ...				1	6	0
Cultivations—						
Tractor Plough		16	0			
Two Drags		9	0			
Drill		2	0			
Harrow		2	0			
Harrow, and Roll in Spring		3	6			
Weeding		3	0			
				1	15	6
Harvesting—						
Cutting		1	6			
Twine		1	0			
Opening round and stooking		2	0			
Carting and Ricking		7	0			
Thatching...		2	0			
					19	6
Threshing					14	0
Carting to Station (by Tractor)					3	0
General Expenses					5	6
Upkeep of Implements and Machinery ...					10	0
Interest on Capital @ 5%					6	0
Management...					15	0
				£10	19	8

Average yield 25 bushels grain. } About fair average yield.
„ „ 20 cwts. straw. }

County, KENT. **FARM No. 38.**

POTATOES No. 9.

COST OF GROWING ONE ACRE OF POTATOES on Good Working Loam. 1918 CROP.

			£	s.	d.
Rent and Rates			2	6	0
Manure, 20 tons per acre @ 12/- including cartage and carriage	12	0 0			
Less one-third for succeeding crop ...	4	0 0			
			8	0	0
Spreading				5	0
Artificial, 8 cwts. at 13/- ,including carriage			5	4	0
Sowing ditto...				3	0
Cartage of ditto to field				1	3
Ploughed once, 3 horses (¾ acre per day)			2	13	4
Cultivating twice, 4 horses (8 acres per day)				12	0
York harrowed twice, 2 horses (8 acres per day)				7	0
Rolled once, two horses (8 acres per day)				3	9
Baulked once, 2 horses (3 acres per day)				10	0
Seed potatoes, to include cartage, carrying and wastage			9	12	0
Planting				8	0
Baulked once, 2 horses (3 acres per day)				10	0
York harrowed once, 2 horses (8 acres per day)				3	9
Braking 3 times, 2 horses (3 acres per day)			1	10	0
Hand hoeing...				15	0
Baulked once, two horses (3 acres per day)				11	4
Ploughing out once, 3 horses (3 ac. per day)				14	8
York harrowed once, 1 horse (3 ac. per day)				4	8
Picking up, 20 women and 1 man (3 acres per day)			1	12	8
Carting to clamp, 3 men, 3 horses and 2 boys (3 acres per day)			1	2	8
Clamping and digging				8	0
York harrowed twice, 2 horses				7	0
Cultivated once, 4 horses				6	3
Picking up harrowed potatoes (2 women 1½ acres per day)...				6	0
Straw			1	3	0
Earthing clamp @ 3/- per rod				6	0
Unclamping, sorting and carting to station			2	15	5
Clearing haulm				7	0
Interest on capital 6% on £40			2	5	0
Management and Supervision			1	5	0
			£47	0	7

NOTE.—These costings are based on 10/- per day per horse and 10/- per man, to include repairs, depreciation, overtime and unremunerative work. Crop 6½ tons per acre.

County, KENT. **FARM No. 39.**

POTATOES No. 10.

COST OF ONE ACRE OF POTATOES Grown on Light Loam Soil. 1918 CROP.

			£	s.	d.
Rent and rates			2	6	0
Dunging, 30 tons per acre @ 15/-, including carting and spreading	22	10 0			
Less one-third charged to succeeding crop	7	10 0			
			15	0	0
Half ton bone manure, including all expenses			7	0	0
Ploughed once, 3 horses (¾ acre per day)			2	15	0
Harrowed twice, 4 horses (10 acres per day)				10	0
Baulked once, 2 horses (3 acres per day)				10	0
Planting, including man, empties, cartage				8	0
Seed, including carriage, 17 cwts @ 11/-			9	7	0
Earthed once, 2 horses (3 acres per day)				11	0
Braked once, 2 horses (3 acres per day)				11	0
York harrowed once, 2 horses (10 acres per day)				3	0
Hand hoed				10	0
Braked twice, 2 horses (3 acres per day)			1	3	0
Earthed once, 2 horses				11	0
Ploughed out once, 3 horses (2½ acres per day)				16	0
Picking up @ 1½*d*. per bushel			1	15	0
Carting and loading to clamp			1	6	0
Unloading and making clamp				12	0
Straw				15	0
Clamping for winter			1	10	0
Ox harrowed once (5 acres per day) ...				8	0
York harrowed once, 2 horses (8 acres per day)				3	1
Carting off bine (1½ acres per day) ...				13	0
Hedging and Brushing				2	0
Unclamping, sorting, loading and carting to station			4	4	0
Use of bushels				15	0
Insurance on produce, tackle and workmen				6	0
Interest on capital, 7½ % on £35... ...			2	12	0
Management and Supervision			1	5	0
			£58	14	0

NOTE.—The above is based on the cost of a horse at 10/6 and horseman at 10/- per day, including all repairs and use of tack overtime and unremunerative work.
Crop ... ... 7 tons per acre.

FARM No. 40.

County, SOMERSET.

Size of Farm : 220 acres arable, 140 acres pasture. Soil : Heavy clay.

System of Farming : Cropping, stock rearing, and feeding.

NOTE.—In following statements horse labour taken at 7/- per working day as per detailed statement put in ; man labour at average of 42/- per week.

WHEAT No. 21.

COST OF GROWING WHEAT PER ACRE—1919 Crop.

Land : Heavy clay.

Cost based on 48 acres.

	£	s.	d.
Rent, 30/- ; Local Rates, 3/-	1	13	0
Manures—			
5 cwts. slag, @ 6/-, 30/- ½ charged		15	0
1 cwt. sulphate of ammonia, carting and application	1	0	0
Seed, 9 pecks	1	3	0
Cultivations—			
Ploughing. 3 horses. ¾ acre per day	2	6	0
Dragging twice, 4 horses, 8 acres per day		10	6
Dragging twice, 3 horses, 8 acres per day		8	0
Drilling, 2 horses, 3/6 ; harrowing, 1 horse, 1/9 ...		5	3
Dragging, 2 horses, 2/8 ; rolling twice, 2 horses, 5/4		8	0
Harvesting—			
Cutting, tying, and stitching (10 acres per day) ...		15	0
Carrying, 8 men, 5 horses, 2 boys (10 acres per day)		13	3
Thatching, 1/8 ; one-half of reed, 5/-		6	8
Threshing, on basis of 9 acres per day	1	3	0
Delivering corn, 8/- ; use of implements, repairs, etc., 15/-	1	3	0
Hedging, ditching, hauling, headlands, etc.... ...		12	6
Fallow, every 4th year, @ £8	2	0	0
Interest, @ 5 %		15	0
General expenses		10	0
Allowance for management	1	0	0
	£17	7	8

Yield—
1916. 56 acres average 35 bushels.
1917. 78 „ „ 37 „
1918. 73 „ „ 38 „

Average over seven years, about 36 bushels grain and 25 cwts. straw.

BARLEY No. 12.

COST OF GROWING BARLEY PER ACRE—1919 Crop.

Land : medium. The spring cultivations would be governed entirely by the weather.

	£	s.	d.
Rent, 30/- ; Local Rates, 3/-	1	13	0
Manures—			
5 cwts. slag, @ 6/-, 30/-, ½ charged		15	0
¾ cwt sulphate, carting and application		15	0
Seed, 10 pecks, per acre 3/-	1	10	0
Cultivations—			
Ploughing, 2 horses, ¾ acre per day	1	8	0
Cultivating, 4 horses, 6 acres per day...		7	0
Dragging twice, 3 horses, 8 acres per day		8	0
Rolling, 2 horses, 8 acres per day		2	8
Dragging, 2 horses, 2/8 ; drilling, 2 horses, 3/6 ...		6	2
Harrowing, 1 horse		1	9
Dragging, 1 horse, 1/9 ; rolling, 2 horses, 2/8 ...		4	5
Harvesting—			
Cutting, tying, and stitching (10 acres per day) ...		15	0
Carrying, 8 men, 5 horses, 2 boys		13	3
One-half value of reed, 5/- ; thatching, 1/8		6	8
Threshing, on basis (9 acres per day)	1	2	0
Delivering corn, 8/- ; use of implements, etc., 15/- ...	1	3	0
Hedging, ditching, and hauling headlands		15	0
General expenses		10	0
Interest, @ 5 %		7	0
Management...	1	0	0
Total Cost	£14	2	11

Yields—
1916. 35 acres average 40 bushels.
1917. 40 „ „ 37 „
1918. 35 „ „ 39 „

Average over 7 years, 37 bushels grain and 16 cwts. straw.

MANGOLDS No. 4.

COST OF GROWING MANGOLDS PER ACRE—1919 Crop.

Soil : Heavy clay.

Cost based on 13 acres.

	£	s.	d.
Rent, 30/- ; Local Rates, 3/-	1	13	0
Manures—			
30 loads farm yard manure, @ 4/-, ¾ charged ...	4	10	0
Carting and spreading ditto	3	5	0
1½ cwt. sulphate ammonia, carting and application	1	10	0
Seed, 10 lbs. per acre, @ 3/-	1	10	0
Cultivations—			
Ploughing, 3 horses, ¾ acre per day	2	6	6
Cultivating, 4 horses, 6 acres per day...		7	0
Dragging twice, 3 horses, 8 acres per day		8	0
Rolling and dragging, 2 horses, 8 acres per day ...		5	3
Drilling, 2/7 ; harrowing, 1/9		4	4
Horse hoe, 3 times, 13/6 ; singling, 40/-	2	13	6
Second hoeing	1	4	0
Lifting and topping	1	5	0
Loading and carting, 3 men, 4 horses, 2 days ...	4	18	0
Use of implements and repairs, etc.		10	0
Ditching and hedging		4	0
General expenses		10	0
Interest, @ 5 %		15	0
Management...		15	0
Total	£28	13	7
Less prop. cleaning costs	1	0	0
Net Cost	£27	13	7

Yields.—Average for past 3 years, about 30 tons per acre.

FARM No. 41.

County, GLOUCESTER.

Size of Farm : 120 acres arable, 330 acres pasture

Soil on arable portion : Heavy clay.

System of Farming : Cropping and feeding on grass.

WHEAT No. 22.

COST PER ACRE OF WHEAT AFTER BEANS—1919 Crop.

[Horse @ 6/- per day ; horsemen @ 7/6 ; labourers @ 6/6 per day.]

	£	s.	d.	£	s.	d.
Rent, 25/- ; Rates, 7/-				1	12	0
Manure : share of cost of dung applied to beans				3	0	0
Seed, 2½ bushels, @ 10/- and dressing ...				1	6	0
Cultivations. Autumn—						
Plough, 4 horses and 2 men, ¾ acre per day	2	10	0			
Scuffle		7	0			
Drag, 5 acres per day		5	0			
Harrow, 9 acres per day		2	0			
Drill, 2½ acres per day, 3-rowed ...		6	0			
2 Harrows...		4	0			
Spring—						
2 Harrows...		4	0			
Roll		2	6			
Hoeing		13	0			
				4	13	6
Harvesting.						
Cutting standing crop, 14s. average ...		18	0			
„ laid crop, 22/- average ...						
Hauling and ricking		10	0			
Thatching and materials		8	0			
				1	16	0
Threshing				1	6	0
Carting to Station—3 miles					6	0
Use of Machinery and Implements ...					10	0
General Expenees					7	0
Interest @ 5 per cent.					12	0
Management...				1	0	0
Total				£16	8	6

Average Yield ... ... 35 bushels grain.
28 cwts. straw.

NOTE.—This land has to be bare-fallowed every fifth year at a cost of about £10 per acre. One-fifth of this should be charged to the above crop, making the

Total cost £18 8*s.* 6*d.* per acre.

FARM No. 42.

County, BERKS.

Size of Farm : 350 acres, arable.
250 „ pasture.

System of Farming : Cropping and feeding.

Soil : Dark sandy loam.

HORSE LABOUR No. 14.

COST OF KEEPING A HORSE FOR YEAR 1918-1919.

	£ s. d.	£ s. d.
Foods—		
2 bush. Oats per week @ 50/- per qr....	31 15 0	
For 36 weeks: 2 cwt. Hay per week @ £8 per ton	28 16 0	
For 36 weeks: 1 cwt. Straw per week @ £2 per ton	3 12 0	
Grass, 3/- per week for 16 weeks ...	2 8 0	
		66 11 0
Shoes and Shoeing : 6 sets at 8/- plus removals		2 15 0
Harness and Stable Equipment		2 10 0
Stable : Rent and Rates		5 0
Veterinary : Expenses and medicines ...		15 0
Depreciation : 5 % on £100		5 0 0
Interest on Capital, 5 % on £100 ...		5 0 0
General Expenses and supervision ...		10 0
		£83 6 0

Average Horsemen's Wages ... £2 per week 1919.
„ working day ... ... 7½ hours.

NOTE.—In following costs, man has been taken at 6/8 per day of 7½ hours, and horse at 5/4 per day.

AVERAGE COST OF BARE FALLOWS PER ACRE.

	£ s. d.
3 ploughs @ 30/- each	4 10 0
2 cultivatings	9 0
2 rollings	3 6
5 harrowings	7 0
Rent and Rates...	1 3 0
Broken time, general expenses and implements ...	15 0
Interest on Capital	7 4
Management	5 0
	£7 19 10

Charge ⅘ths to first crop.
⅕ths to second crop.

WHEAT No. 23.

Previous Crop : Bare Fallow.

No. of acres : 40.

AVERAGE COST PER ACRE OF 1919 WHEAT CROP.

	£ s. d.	£ s. d.
Proportion bare fallow		4 16 0
Rent		1 0 0
Rates		3 0
Manure : 3 cwts. wheat manure, ¾ cwt. S/A...		1 19 0
Seed : 3 bush. @ 80/- per qr.		1 10 0
Cultivations—		
Drilling	7 6	
Harrowing and Rolling	3 0	
Bird scaring	2 0	
		12 6
Harvesting—		
Cutting, including twine	18 0	
Stooking and Setting up	2 0	
Carting and Stacking	5 3	
Thatching 2/-. Materials 3/-	5 0	
Raking	1 0	
		1 11 3
Threshing		1 2 6
Carting to station...		4 6
Use of Implements and Machinery ...		17 6
Broken Time		5 0
General Expenses		5 0
Interest on Capital, 5 %		11 0
Management...		18 0
		£15 15 3

Average yield : 32 bush. grain.
20 cwts. straw.

NOTE.—Conditions for harvesting almost ideal. Yield of grain average, but rather under average of straw.

MANGOLDS No. 5.

Previous Crop : Mangolds.

No. of Acres : 10.

AVERAGE COST PER ACRE OF 1919 CROP.

	£ s. d.	£ s. d.
Rent		1 0 0
Rates...		3 0
Manure—		
12 tons dung @ 10/-	6 0 0	
Carting	1 6 3	
Spreading	6 0	
		7 12 3
3 cwts. bone supers and 1½ cwts. sulphate of ammonia and application .		2 11 0
Seed : 8 lbs. @ 3/- per lb.	1 4 0	
Cultivation—		
3 ploughs	5 5 6	
3 cultivates	12 0	
3 rolls	6 0	
4 harrows	6 0	
3 horse hoes	15 0	
3 hand hoes (12/-, 20/-, 15/-)	2 7 0	
		9 11 6
Harvesting—		
Pulling and Filling	18 6	
Carting...	5 0	
		1 4 0
Implements		10 6
Broken Time		5 0
General Expenses		5 0
Interest on Capital		10 0
Management		15 6
		£25 11 9
Deduct proportion cleaning		1 10 9
		£24 1 0

NOTE.—Manures to be carried forward balanced by manures brought forward.

Estimated crop, 24 tons per acre.

BARLEY No. 13

Previous Crop : Wheat. No. of Acres : 20.

AVERAGE COST PER ACRE OF 1919 CROP.

	£ s. d.	£ s. d.
Rent		1 0 0
Rates		3 0
Cultivations—		
Three ploughs, one autumn and two spring, ⅓ acre per day	5 4 6	
Two cultivatings, four horses, one man and one boy, eight acres per day ...	8 0	
Two rollings, ten acres per day ...	4 0	
Four harrowings, ten acres	6 0	
Drilling, man and two horses, ten acres per day	2 0	
Rolling	2 0	
		6 6 0
Seed : 3 bush. per acre @ 70/- per qr. ...		1 6
Manure : 2 cwts. bone supers, ½ cwt. S/A and sowing		1 19 0
Harvesting—		
Binding, including twine		16
Stooking and setting up		2
Carting and stacking		4
Thatching and materials		5
Threshing		1 1
Carting to station		4
Use of Implements and Machinery. Depreciation 7*s.*, repairs 7*s.*, interest 3*s.* 6*d.*		17 6
Broken Time		6
General expenses Insurance, unremunerative work, etc.		5
Interest on Capital 5%		11
Management...		18
Total Cost		£16 5

Average yield for 1919 : 32 bush. Grain.
14 cwts. Straw.

NOTE.—Harvesting conditions were almost ideal for 1919 cro Yield on other hand is under average by from 2 to 3 bushe per acre.

It was suggested that Straw should be credited @ 30/- per to and charged to stock at about 40/- to 55/- according to wheth chaffed or not.

FARM No. 43.

County, ESSEX.

Size of Farm : Arable, 370 acres. Pasture, 300 acres.
Soil : Typical "three horse" land.
System of Farming : Corn growing and milk production
No. of Acres on which estimate based—15.

HORSE LABOUR.—No. 15.

Average number of work horses—18.

AVERAGE COST OF KEEPING EACH HORSE FOR YEAR 1918–19.

	£ s. d.	£ s. d.
Foods. 2 bushels oats per week, all year round, @ 48*s.* per qr.	31 4 0	
7lbs. straw chaff per day, all year round, @ 40*s.* per ton...	2 6 0	
24lbs. hay per day—1st Oct. to 12th May —@ £7 15*s.* per ton	18 12 0	
Grass—13th May to 30th Sept.—1½ acres per horse, @ 46*s.* per acre	3 9 0	
		55 11 0
Shoes and shoeing. 6 new sets per ann. @ 8*s.*	2 8 0	
Allow for removals, etc....	10 0	
		2 18 0
Harness		1 10 0
Stable equipment		5 0
Veterinary attendance and medicines ...		1 0 0
Rent, rates, and repairs to stable		10 0
General expenses, including supervision		10 0
Depreciation. 5% on average value £100		5 0 0
Interest on capital. 5% on average value		5 0 0
Total cost ...		£72 4 0

Cost of litter put against value of manure.
Average number of working days per annum ... 260
Average cost of one horse per working day ... 5*s.* 7*d.*
Average cost of horseman, 6*s.* per day inclusive.
(For 52 hour week.)

BARE FALLOWING PER ACRE (1918 Prices).

	£ s. d.
Cultivating twice by steam tractor per contract ...	1 5 0
Coal, 3 cwts. per acre @ £2 per ton	6 0
2 days with man and 2 horses	2 3
2 harrowings with 2 men and 4 horses—10 acres per day	6 10
Cross ploughed with tractor	1 5 0
Drawn out on large stetch and head in	2 0
Harrowed once, 2 men and 4 horses	3 5
Drawn out on half rood—3 days work	4 6
Ploughed off 4 bouts...	1 0 0
Harrowed 2 men and 4 horses	3 5
Use of machinery and implements	5 0
Rent	1 0 0
Rates	4 0
General expenses	5 0
Interest on capital @ 5% per annum	6 6
Management	10 0
Total cost ...	£7 8 11

Charge ½ to wheat ; ⅜ to beans or clover ; ⅛ to wheat.

WHEAT.—No. 24.

COST OF PRODUCTION PER ACRE OF 1918 CROP.

	£ s. d.	£ s. d.
Bare Fallowing : Share of		3 14 6
Rent		1 0 0
Rates		4 0
Manure : 8 cwts. slag @ 4*s.* 3*d.* (charge 50%)	17 0	
1 cwt. S/A @ 17*s.*	17 0	
Application	1 6	
		1 15 6
Seed : 2 bushel @ 10*s.* and dressing @ 6*d.* per acre...		1 0 6
Cultivations : Ploughing, man and 2 horses, ¼ acre per day	1 2 8	
Harrowing, 3 times, 10 acres per day...	5 1	
Drilling, 2 men, 2 horses, 10 acres per day	3 5	
Water furrows	2 0	
Striking up	1 2	
Harrowing in spring	2 0	
Rolling, 10 acres per day	1 8	
Hoeing and weeding	5 0	
		2 3 0
Harvesting : as per previous estimate, No. 25		1 8 2
Threshing : " " "		1 1 7
Marketing : " " "		12 0
Use of machinery and implements ...		7 6
Share of general expenses		7 6
Broken time and unremunerative work		7 6
Interest on capital 5%		8 0
Management		15 0
Total cost ...		£15 4 9

Average yield—32 bushels grain.
25 cwts. straw.

WHEAT.—No. 25.

No. of Acres on which estimate based—Field of 10 acres.
Previous Crop—Beans.

AVERAGE COST PER ACRE 1918 CROP.

	£ s. d.	£ s. d.
Rent		1 0 0
Rates		4 0
Manures :		
8 cwt. slag @ 3*s.* 6*d.*, £1 8*s.* (charge 50%)	14 0	
1 cwt. S/A @ 17*s.*	17 0	
Application	1 6	
On Beans.		1 12 6
12 loads dung @ 8*s.*, £4 16 0		
Application @ 2*s.* 1 4 0		
£6 0 0 Charge 30%		1 16 0
Seed : 2 bush. @ 10*s.* and dressing @ 6*d.* per acre		1 0 6
Cultivations :		
Ploughing, 1 man and 2 horses, ¼ acre per day	1 2 8	
Harrowing, 4 times, 1 man and 2 horses, 10 acres per day	6 10	
Drilling, 2 men and 4 horses, 10 acres per day	3 5	
Making water furrows	2 0	
Striking up	1 2	
Harrowing in spring	2 0	
Rolling, 1 man and 2 horses, 10 acres per day	1 8	
Hoeing and weeding	5 0	
		2 4 9
Harvesting : Opening round	2 0	
Cutting with binder, 2 men and 6 horses, 6 acres per day	7 6	
Twine, 4 lbs. @ 11*d.* per lb.	3 8	
Stooking	3 0	
Carting	7 6	
Raking up...	6	
Thatching @ 2*s.* 6*d.* per sq. (10 sq. per 10 acres)	2 6	
Straw, 1 cwt. per acre	1 6	
		1 8 2
Threshing : 4 qrs. per acre, 5*s.* per qr. ...	1 0 0	
Coals, 8 cwts. for 40 qrs. @ 2*s.* per cwt.	1 7	
		1 1 7
Marketing : Taking from thresher, storing and carting to station		12 0
Use of machinery and implements ...		7 6
Share of general expenses, hedging, ditching, etc.		7 6
Broken time and unremunerative work...		7 6
Bare fallowing : Share of...		12 0
Interest on capital, 5%		5 6
Management		15 0
Total cost ...		£13 14 6

Average yield—32 bush. grain, 25 cwts. straw.

FARM No. 44.

WHEAT No. 26.

County, KENT.

Size of Farm : 186 acres arable. 15 acres pasture.
Soil : Medium.
System of Farming : Mixed with hops and market gardening.

COST OF PRODUCTION OF ONE ACRE OF WHEAT 1919 CROP.

	£ s. d.	£ s. d.
Rent and rates		1 13 0
Manure for potatoes @ 20 ton per acre, 10*s.* per acre	10 0 0	
Less two-thirds cost to potatoes	6 13 4	
		3 6 8
Ploughed once, 4 horses		2 0 0
Sowing wheat		10
2½ bus. seed including dressing and carting		1 17 6
2 cwts. sulphate of ammonia		1 14 0
York harrowed twice, 2 horses		7 0
Sowing		3 10
York harrowed once		2 6
Rolled once		2 6
Hoeing and weeding		6 6
Cutting round, cutting with binder, and string		18 0
Shocking		4 6
Carrying and stacking		10 0
Thatching, including straw and labour...		9 6
Threshing, and carting to market ...		1 12 0
Hedging and ditching		2 6
Repairs to harness, implements, etc. ...		4 0
Interest on capital @ 5%		16 0
Management...		15 0
		£17 5 10

NOTE.—This is based on the cost of a horse for each working day at 8*s.* and the horseman's wages at 8*s.*, allowing 12½% on wages for unremunerative work. No allowance is made for share of fallows which generally pay for themselves, and the estimated crop is 4 quarters per acre and ¾ ton per acre of straw.
Average crop—4½ qrs. grain. 1 ton straw.

FARM No. 45.

County, YORKS (East Riding).

Size of Farm : 60 acres arable. 50 acres Pasture.
Soil : Heavy.
Oats : No. 11.

20 ACRES GARTON'S SUPREME OATS SOWN AFTER TURNIPS—1918 CROP.

	£	s.	d.
	Cost per ac.		
22 wagon loads of farmyard manure, carted to hill and afterwards spread on land (poor parts only) @ 5s. ...	5	10	0
2 horses 1 man, 11 days @ 15s. 4d. per day	8	8	8
2 „ 1 „ ploughing 52 days @ 15s. 4d.	39	14	0
3 „ 1 „ chisel harrowing, 6 days twice over @ £1 0s. 2d.	6	1	0
4 horses 2 men, gib harrowing twice over 4 days @ £1 10s. 8d.	6	2	8
4 horses 2 men, rolling, twice over 4 days @ £1 10s. 8d.	6	2	8
3 „ 1 man, gib harrowing once, 1½ days	1	10	3
12 qrs. seed oats (including cleaning oats @ 2s. 6d. per qr.) @ £2 12s. 9d. per qr.	31	10	0
Carting oats to field and drilling, 2 men, 2 horses, 2 days	2	1	10
1 man, pair of horses rolling, 2 days	1	10	8
„ „ straight toothed harrowing, 1½ days @ 15s. 4d.	1	3	0
Looking corn, 3 men 2 weeks=6 weeks @ £1 5s. ...	7	10	0
4 men £3 15s., 4 horses £2 3s. 9d. two weeks harvest	38	15	0
4 half days at stacks ; thatching, 6s. 6d. ; nets, 2s. ...	1	14	0
Straw drawn for thatching (approx.)	2	0	0
Threshing engine £6, men's wages £2 16s.	18	16	0
Delivering 46 qrs. oats, £1 19s. 6d. ; bags, 3s. 10d. ...	2	3	4
Rent, £210 ; rates, £30 18s. ; taxes on 20 acres land, £45	52	0	0
Blacksmith and veterinary surgeons a/c.	9	19	6
Repairs and renewables—proportion	8	2	4
Threshing coal, oil and lighting a/c.	3	12	0
Binder twine—proportion	5	0	0
Plough shares and coulters	1	15	0
Interest on capital 5% on £16	16	0	0
Management	15	0	0
Total ...	£291	1	11

Cost per acre—£14 11s.
Total yield—144 qrs. grain, 36 tons straw.
Yield per acre—57½ bush. grain.
36 cwts. straw.
Total cost of man labour—£73 14s. 2d.

WHEAT No. 27.

16 ACRES BENEFACTOR WHEAT SOWN AFTER SEEDS.

(Grazed with ewes and lambs fed and caked) ploughed and pressed October 10th to 27th/17.

	£	s.	d.
4 tons basic slag at cost, applied Feb. 1917, no charge labour (consider seeds benefit)	8	0	0
88 wagon loads manure farmyard @ 5s.	22	0	0
4 horses, 20 days @ 4½ days, weekly cost 43s. 9d.=80 days £4 10s. 3d.	19	9	0
3 men, 20 days @ 4½ days weekly wage £1 5s. ...	16	13	4
3 horses ploughing and pressing, 11½ days	13	2	0
3 men ploughing and pressing 33¾ days @ 5s. 6¾d. ...	9	8	6
1 man and pair of horses harrowing 2 days @ 15s. 4d. ,	1	10	8
Spring 1918.			
1 man, pair of horses, harrowing, rolling 4 days @ 15s. 4d.	3	1	4
3 men looking wheat 5 weeks @ 25s.=£6 5s.	18	15	0
4 men's harvest wages, 2 weeks	30	0	0
4 horses harvest 2 weeks @ 43s. 9d. pair	8	15	0
7 qrs. Benefactor seed wheat @ £4	28	0	0
Corversine dressing and lime preparing	1	9	4
4 half day stacks thatching by piece 6s. 6d., nets @ 2s., 8s. 6d.	1	14	0
Straw drawn for thatching (approx.)	2	0	0
Threshing expenses. Engine £6, men's wages, &c., £12 16s.	19	2	0
Bags		6	0
Delivering to station 71 qrs. wheat, 3 horses, 2 men, 3½ days	4	10	0
Rent, £210 ; rates, £30 18s. ; taxes, £45 on 16 acres arable	41	12	0
Blacksmith's and veterinary surgeon's a/c.	9	19	6
Repairs and renewals—proportion	8	2	4
Threshing—coal, oil and lighting	3	12	0
Binder twine	5	11	0
Plough shares, Coulters, etc.	1	15	0
Interest on capital	16	0	0
Management	15	0	0
Total ...	£309	8	0

Cost per acre—£19 6s. 9d.
Total yield—65 qrs. grain, 40 tons straw.
Yield per acre—32½ bush. grain
50 cwts. straw.
Total cost of man labour—£94 0s. 5d.

FARM No. 46.

County, KENT.

Size of Farm : 72½ acres arable. 125¾ acres pasture.
Soil : Heavy clay.
System of farming ; usual four-course.

COST OF PRODUCTION OF ONE ACRE OF WHEAT 1919 CROP.

	£	s.	d.
Rent and rates	1	4	6
Broadshared once, 3 horses (4 acres per day)		9	4
Burning and clearing rubbish and gratten	1	1	6
Application of 15 tons farmyard manure at 10s. per ton, including carting ... £7 10 0			
Less half charged to succeeding crop ... 3 15 0			
	3	15	0
Spreading ditto @ 1s. 3d. per ton		18	9
Ploughed once, 3 horses (2 acres in 3 days)	2	16	5
Cultivated twice		12	8
Harrowed once, 2 horses		3	8
Drilled once, 2 horses, 2 men (8 acres per day) ...		1	9
3 bush. seed, 10s. per bush.	1	10	0
Harrowed once, 2 horses		3	5
Water furrowing, opening eyes, etc.		3	6
Hedging and ditching		3	6
Ring rolled once, 2 horses		4	7
Harrowed twice, 2 horses		5	6
Weeding by women		6	3
Cutting round, and with binder, including string ...		17	6
Shocking, carting and stacking		14	3
Threshing, carting and stacking straw		19	6
Hire of sacks and carting to market		7	3
Repair and maintenance of implements		4	6
Interest on capital, 5% on £15		15	0
Management		15	0
	£18	15	11

NOTE.—This is based on the cost of a horse for each working day at 10s., horsemen's wages, 7s. 6d., labourer's do. 6s. 6d.
No allowance is made for share of bare fallows, which must be done every fourth or fifth year. Estimated crop of this year on the 25 acres to which the above refers is 3 qrs. per acre and 18 cwts. of straw.
Average yield—27 bush. grain.
22 cwts. straw.

FARM No. 47.

County, KENT.
WHEAT No. 29.
Size of Farm : 170 acres arable. 150 acres pasture.
Soil : Medium and sandy loam.
System of Farming : Mixed cropping, with stock.

COST OF PRODUCTION OF ONE ACRE OF WHEAT, 1919 CROP (average over 40 acres).

	£	s.	d.
Rent and rates	£1	18	0
Unexhausted value of 16 tons of dung applied to beans previous crop at 10s. per load ... £8 0 0			
Less two-thirds used by such crop ... 5 6 8			
Balance chargeable to wheat crop	2	13	4
Cultivated 4 times, 3 horses (5 acres per day) ...	1	11	4
Ox harrowed 3 times, 2 horses (5 acres per day) ...		17	8
Drilled, 2 horses (6 acres per day)		6	0
York harrowed once, 1 horse		2	2
Rook minding (a large rookery 2 miles away) ...		3	0
2½ bushel of seed @ 10s. per bushel	1	5	0
York harrowed 1½ acres, and once rolled		6	6
Horse hoed twice		7	0
Spudded hand, once		6	0
*Cutting by tractor, including cutting round and string	1	2	0
Shocking		2	6
Stacking and carrying	1	0	0
Thatching		9	0
Threshing and delivery to market	1	6	0
Shoddy, 1 ton, plus carriage, no residue	1	0	0
Hedging and ditching		5	0
Interest on capital, 5% on £16		16	0
Management		15	0
	£19	11	1

NOTE.—This is based on the cost of a horse for each productive day's work of 10s. (including repairs and depreciation to implements and harness). Horseman's wage 8s. 4d. per day, but taken at 9s. per productive day's work.
Average crop for this year—4½ qrs. per acre and 1½ tons of straw.
Average yield—4½ qrs. grain.
1½ tons straw.

* Average of 4 years—	£	s.	d.
Paraffin, 2½ galls. @ 1s. 4d. ...		3	4
Lubricating oil and grease ...		2	0
Labour with tractor and binder		3	0
String		7	0
Wear and tear		2	0
Shocking		3	0
Opening round		1	8
	£1	2	0

FARM No. 48.

County, NORFOLK.
Size of Farm : 100 acres arable. Soil medium ; typical of district.
57 „ pasture.
System of Farming : cropping and stock feeding.
Previous Crop : hay stubble.
No. of acres on which estimate based, 10.

WHEAT—No. 30.

AVERAGE COST PER ACRE, 1918 CROP.
(Horse @ 6*s.* 6*d.* and man @ 6*s.* per working day.)

	£ s. d.	£ s. d.
Rent		1 0 0
Rates		4 0
Manure : 10 tons @ 10*s.* per ton £5 0 0		
Carting and spreading ... 19 6		
5 19 6		
Charge ⅔	4 0 0	
Sulphate of ammonia @ 18*s.* applied ...	18 0	
		4 18 0
Seed : 3 bushels (all purchased)		1 16 0
Cultivations.		
Ploughing, 2 horses, 1 acre per day ...	19 0	
5 Harrowings, 2 horses, 12 acres per day ...	7 11	
2 Rollings, 1 horse 10 „ „ ...	2 6	
Drilling, 2 horses 10 „ „ ...	2 0	
Horse hoeing, 1 horse, man and boy, 6 acres per day	3 0	
Chop hoeing	5 0	
		1 19 5
Harvesting.		
Cutting, binding, stooking, carting and stacking-man labour by contract ...	1 0 0	
String	3 6	
Horse labour	6 0	
Materials for thatching	5 0	
		1 14 6
Threshing : 8 coombs @ 2*s.* per coomb ...		16 0
Carting to station, 3 miles		5 6
Use of machinery and implements and hire of sacks		10 0
Broken time		7 6
General expenses, hedging and fencing 6*s.* 6*d.*, insurance, &c.		8 6
Interest on outlay, 5%		7 0
Management		15 0
Average yield 32 bushels grain. 25 cwts. straw. Total cost ...		£15 1 5

MANGOLDS.—No. 6.
Previous crop : wheat.
No. of acres on which estimate based, 10.

AVERAGE COST PER ACRE, 1918 CROP.
(Man @ 6*s.* and horse @ 6*s.* 6*d.* per working day.)

	£ s. d.	£ s. d.
Rent		1 0 0
Rates		4 0
Manure.		
Brought forward from wheat	2 0 0	
9 tons muck @ 10*s.* £4 10 0		
Carting and spreading ... 1 7 0		
5 17 6		
Charge	5 0 0	7 0 0
3 cwts. supers @ 5*s.* 9*d.* ... 17 3		
Charge ¾ 13 0		
1 cwt. sulph./amm. @ 16*s.* 6*d.* 16 6		
Application 2 0		
		1 11 6
Seed : 7 lbs. @ 1*s.* 4*d.*		9 4
Cultivations.		
5 Ploughings (including baulkings) 2 horses, 1 acre per day	4 5 0	
3 Cultivatings, 3 horses, 8 acres per day ...	9 6	
3 Harrowings, 2 horses, 10 „ „ ...	4 9	
2 Rollings, 1 horse, heavy roller, 8 acres per day	3 0	
Drilling, 1 horse, 4 acres per day	3 1	
8 Horse-hoeings, 6 „ „	16 0	
Boy seeding	2 0	
Hand hoeing twice	1 10 0	
Singling out by women	4 6	
		7 17 10
Harvesting.		
Pulling, topping and filling, man labour ...	1 0 0	
Horse labour, 3 horses, ¼ acres per daily ...	1 6 0	
Straw and carting	5 0	
Earthing clamps	4 6	
		2 15 6
Use of machinery and implements		7 6
Broken time and unremunerative work ...		10 0
General expenses		7 6
Interest on capital 5%		11 0
Management		15 0
Total cost ...		£23 9 2
Average yield per acre 20 tons.		

FARM No. 49.

County, GLOUCESTER.
Size of Farm : 205 acres arable.
205 acres pasture.

Soil : Black, moorish, lying on gravel. Low and wet. Bad for sheep.

System of Farming : Cropping and feeding sheep for manure.

MANGELS No. 7.

AVERAGE COST PER ACRE OF 16¼ ACRES, 1919 CROP.

	£ s. d.	£ s. d.
Rent, 20*s.*, rates, 2*s.*		1 2 0
Manures.		
5 cwts. supers @ 7*s.* 3*d.*	1 16 3	
1 cwt. sulph. amm.	16 6	
Sowing	1 0	
15 tons dung (from stores) @ 8*s.*	6 0 0	
Carting and applying	1 10 0	
		10 3 9
Seed : 4 lbs. @ 2*s.* 6*d.*		10 0
Cultivations. Horses @ 7*s.* 6*d* per working day.		
2 ploughs	1 16 0	
Cultivate	2 9	
2 drags	10 0	
Roll	2 0	
Harrow	2 0	
Drill—seed and supers.	2 6	
2 rolls	4 0	
Hand hoe	1 0 0	
Horse hoe	6 0	
Hand hoe second time	10 0	
		4 15 3
Use of machinery and implements		10 0
General expenses		7 6
Interest—5%		9 0
Management		15 0
		18 12 6
Fed off on ground by sheep		5 0 0
To be charged to crops		£13 12 6

NOTE.—This is bad sheep ground, and sheep would not be kept except to convert crop into manure.

WHEAT No. 31.

AVERAGE COST OF GROWING WHEAT PER ACRE AFTER ROOTS FED OFF—1919 CROP.

	£ s. d.	£ s. d.
Proportion of cost of roots		6 0 0
Rent and rates		1 2 0
Seed : 2½ bushels and dressing		1 6 0
Cultivations.		
Plough—3 horse, double furrow, 1½ acres per day	18 6	
Cultivate, 2 horses, 8 acres per day	2 9	
Drag, 3 horses, 10 acres per day	2 6	
Harrow, 2 horses, 10 acres per day	2 0	
Roll, 2 horses, 10 acres per day	2 0	
Drill, 2 horses, 10 acres per day	2 0	
Harrow and roll	4 0	
		1 13 9
Harvesting.		
Cutting, 4 horses, 12 acres per day	3 6	
Shocking	2 0	
Twine	5 0	
Carting and stacking	6 0	
Thatching	2 0	
		18 6
Threshing		12 0
Carting to station		4 0
Use of machinery and implements		10 0
General expenses		5 0
Interest 5%		10 0
Management		15 0
Total cost		£13 16 3
Yield per acre, 1919	23 bush. grain. 21 cwt. straw.	
Yield per acre, average 5 years ...	20 bush. grain. 19 cwts. straw.	

FARM No. 50.

County, SOMERSET.

Size of Farm : 230 acres arable ; 100 acres pasture.

Soil : Sandy loam, easily worked.
System of farming : Corn growing (chiefly barley) and feeding.

Five course—3 corn crops, 1 year catch crops and roots, 1 year seeds.

HORSE LABOUR No. 16.

COST OF HORSE LABOUR FOR YEAR 1918–19.

Foods.	£ s. d.	£ s. d.
Summer, May to September :		
21 weeks @ 19*s.* per week (per detailed statement)...	19 19 0	
Winter, October to April :		
31 weeks @ 28*s.* 6*d.* per week (per detailed statement)...	44 3 6	
		64 2 6
Shoeing. New shoes and removes (as per detailed statement), present cost 10*s.* per set ; pre-war, 2*s.* 8*d.* 1918, 8*s.* ...		3 0 0
Harness. Upkeep and repairs (present cost full set harness, £24 10*s.* ; pre-war, £8 3*s.* 4*d.*)...		3 0 0
Stable equipment		12 6
Veterinary expenses		1 0 0
Depreciation...		10 0 0
Rent, rates, and repairs on stable ...		1 0 0
Interest on capital		4 10 0
General expenses and supervision ...		10 0
Total cost		£87 15 0

Manure against litter.

Average number of working days about 260 per annum.
Average cost per working day per horse about 7*s.*
Average cost of man labour per day 7*s.*

MANGOLDS No. 8.

COST PER ACRE OF GROWING MANGOLDS. 1918 CROP.

Rent, per acre	1 15 0	
Local rates, per acre	5 0	
		2 0 0
Farmyard manure, 15 tons @ 10*s.*	7 10 0	
Haulage	2 0 0	
Spreading	9 0	
	£9 19 0	
Proportion charged		6 0 0
Artificial manures.		
5 cwt. Super Phosphates ...	1 10 0	
2 „ Sulphate/Ammonia ...	2 0 0	
6 „ Salt	12 0	
	£4 2 0	
All charged to root crop with exception of 25 % of super. 7*s.* 6*d.*		3 14 6
Seed, 10 lbs. per acre @ 3*s.* per lb.		1 10 0
Cultivations.		
3 ploughings @ 21*s.* per acre...	3 3 0	
6 rollings @ 2*s.* 6*d.*	15 0	
6 draggings @ 2*s.* 6*d.*... ...	15 0	
3 harrowings @ 2*s.* 6*d.* ...	7 6	
Drilling...	2 6	
3 horse hoeings	9 0	
		5 12 0
Singling and hand hoeing ...		2 10 0
Lifting, topping, tailing... ...		1 4 0
Hauling and pitting		4 0 0
Covering in cave, labour 10*s.*, straw 5*s.*		15 0
Implements, use of		10 6
General expenses, proportion ...		12 6
Interest on average outlay @ 5%		18 0
Management, allowance for ...		1 0 0
		£30 5 6
Credit proportion of cleaning costs ...		1 0 0
		£29 5 6

Average yield per acre—30 tons.
Number of acres on which estimate was formed, 8 acres.
Soil—sandy loam ; condition, clean.

BARLEY No. 14.

AVERAGE COST PER ACRE OF ABOUT 100 ACRES.

1918 Crop.

	£ s. d.	£ s. d.
Rent, 35*s.*, rates, 5*s.*		2 0
Manure. Direct and proportion of manurial residues		2 0
Seed. 2 pecks		1 2
Cultivations.		
Ploughing, 2 horses, ¾ acre per day ...	1 8 0	
Draggings, average 4 times, 8 acres per day	10 6	
Rolling, 8 acres per day...	2 6	
Drilling, 2 horses, 2 men, 8 acres per day	3 6	
Harrowing and rolling	5 0	
Weeding	3 6	
		2 13
Harvesting.		
Cutting, 4 horses, 2 men, 8 acres per day	6 0	
Twine	5 0	
Stooking	3 0	
Carrying : 4 men and 8 horses, 5 extra men, 2 boys ; teas ; 8 acres par day	15 9	
Thatching...	9 0	
		1 18
Threshing		1 5
Marketing		9
Use of machinery and implements ...		10
General expenses, including hedging and ditching		17
Proportion of cleaning costs		1 0
„ liming „		6
Interest @ 5 %		8
Management...		15
Total cost		£15 4

Average yield per acre—36 bushels grain. 15 cwts. straw.
Soil—Sandy loam, easily worked.

FARM No. 51.

County, HEREFORD.

Size of Farm : 300 acres arable. 200 acres pasture.

Soil : Typical light red loam on sandstone.

System of Farming. Mixed.

WHEAT No. 32.

COST PER ACRE OF 1919 WHEAT CROP.

	£ s. d.	£ s. d.
Rent		18
Rates		3
Manure.		
12 tons dung (from stores) @ 7*s.* ...	4 4 0	
Carting, 2*s.* per load ; spreading, 5*s.* ...	2 0 0	
	6 4 0	
Charge ...		5 0
Mixture of phosphates and sulph. amm. applied		1 0
Seed : 3 bush. @ 11*s.*, dressing, 9*d.* ...		1 13
Cultivations.		
(Horse @ 7*s.*, man @ 7*s.* per day)		
Ploughing—2 horses, ¾ acre per day ...	1 8 0	
3 harrows—8 acres per day	8 0	
Drill—6 to 8 „ „ „	3 0	
Harrow	2 0	
Harrow in spring	2 6	
Roll	2 0	
Weeding	4 0	
		2 10
Harvesting.		
Opening round	1 0	
Cutting—3 horses, 6 acres per day ...	5 6	
Stooking	2 0	
String	4 0	
Carting and stacking	11 0	
Thatching...	5 0	
		1 8
Threshing, including coals		1 1
Carting to station		5
Use of machinery and implements ...		12
General expenses		10
Interest on capital—5 %		12
Management		15
		£16 8

Average yield per acre—28 bush. grain. 16 cwts. straw.
Yield for 1919 about an average.

FARM No. 52.

County, CHESHIRE.

Size of Farm : 45 acres. Arable, 20 acres. Pasture, 25 acres.
System of Farming (Mixed)—Rotation : Roots, wheat or oats, hay, grass, oats.
Soil : Medium.

ROOTS No. 9.

SWEDES (1918 Crop.)

	Per acre. £	s.	d.
Rent	2	10	0
Local rates		4	0
Farmyard manure—20 tons @ 10*s.*	10	0	0
Carting and spreading	1	10	0
Superphosphate—5 cwt. at 3*s.*		15	0
Seed—4 lbs. of swede or 8 lbs. of mangolds		10	0
Ploughing—2 horses one day per acre	1	0	0
Cultivating—2 horses ½ day per acre	1	0	0
Harrowing—2 horses 1 hour per acre		2	0
Drilling up—2 horses 2 hours per acre		10	0
Sowing seed and rolling—1 horse ½ day per acre		4	0
Side hoeing young plants—30 hours per acre	1	0	0
Scuffling—1 horse 3 hours per acre		4	0
Singling out—30 hours per acre	1	0	0
Scuffled twice before lifting—1 horse 6 hours per acre		8	0
Use of all implements, wear and tear		10	0
Lifting or topping and tailing—about 30 hours per acre	1	0	0
Carting to hog or pit—1 horse and man	1	0	0
One man to hog or soil up—10 hours per acre		10	0
General expenses, such as trimming hedges, ditches and general charges		10	0
Interest on capital		11	6
General management		15	0
	£25	13	6
Deduct proportion cost of manures, £3	3	0	0
Net cost	£22	13	6

Average yield per acre—30 tons.

POTATOES No. 11.

COSTS FOR GROWING POTATOES (1918 Crop).

	Per acre. £	s.	d.
Rent	2	10	0
Local rates		4	0
Farmyard manure—20 tons @ 10*s.* per ton	10	0	0
Spreading and knocking in drill	1	10	0
Seed—12 cwt. @ 7*s.*	4	4	0
Ploughing—2 horses 1 day per acre	1	0	0
Cultivating—2 horses ½ day per acre	1	0	0
Harrowing—2 horses 1 hour per acre		2	0
Drilling up—2 horses 2 hours per acre		10	0
Dropping seed—1 man 1 day per acre		8	0
Covering up—2 horses 2½ hours per acre		12	0
Drill harrowing down 3 times—1 hour per acre		6	0
Scuffling 3 times—1 horse about 3 hours per acre each operation		12	0
Hoeing if not over weedy		12	0
Soiling up twice	1	0	0
Lifting of potatoes—1*s.* per rood, 75 rood to acre	3	15	0
Carting to clamp—1 horse and man		15	0
Clamping or hogging and straw		15	0
Use of machinery and implements		10	0
General expenses, such as hedging and ditching, etc.		10	0
Interest on capital		16	0
General management	1	10	0
	£33	1	0
Deduct proportion of manures, £4	4	0	0
	£29	1	0

Yield per acre based on 4 acres—6½ tons per acre seed and ware.

NOTE.—These two examples were made up by a small working farmer who does most of the work himself. Attention is drawn to the amount of work done per day, also to the fact that because of the careful handling fewer tillages are required.

FARM No. 53.

County, SHROPSHIRE.

POTATOES No. 12.

Size of Farm : 140 acres arable, 91 acres pasture, 9 acres rough land, buildings, etc.
Soil : Light to medium. Rather foul.
System of farming : Mixed.
Previous crop : Wheat.
No. of acres grown : 6½ (Arran Chiefs).

COST OF PRODUCTION (1919 Crop).

	Per acre.	£	s.	d.	£	s.	d.
1. Cleaning the ground.							
Stubble ploughing (3 horses and double plough)	„	1	0	0			
2nd ploughing (2 horses and single plough)	„	1	7	3			
2 cultivatings (4 horses do 6 acres per day)	„		15	0			
Ox harrowing (3 horses do 6 acres per day)	„		4	5			
2 harrowings (2 horses do 10 acres per day)	„		4	2			
2 chain harrowings (2 horses do 12 acres per day)	„		3	2			
Removing twitch (women)	„		7	6			
2 cultivatings	„		15	0			
Ox harrowings	„		4	5			
2 harrowings	„		4	2			
2 chain harrowings	„		3	2			
Removing twitch (burning)	„		4	0			
Cost of cleaning	„	5	12	3			
Proportion of cost of cleaning to potatoes	„				3	12	3
2. Seed and setting, manures, etc.							
Rent and rates		1	6	6			
Seed. 4 tons 7 cwt. cost £37 for 6¼ acres		5	13	1			
					6	19	7
Manures. 10 tons dung		5	0	0			
10 tons dung. Carting and spreading		2	10	0			
5 cwt. steamed bone flour		3	0	0			
1¼ cwt. sulphate of ammonia		1	4	0			
Applying artificials			4	0			
		11	18	0			
Credit ⅓ of manure (other than ammonia) to potatoes		7	2	8			
Rolling ridges (1 man, 1 horse, 10 acres per day)			1	6			
Ridging. (2 horses, 27 in. ridges, 3½ acres per day)			11	8			
Rolling			1	6			
Setting (women)			7	0			
Splitting ridges			11	8			
Grubbing ridges			3	6			
Harrowing ridges down			1	7			
Scuffling			3	6			
Hand cleaning			7	6			
Soiling up (1 horse 3 acres per day)			5	6			
					2	14	11
3. Estimates of harvesting and marketing.							
Digging : horsework (1 man and 2 horses)		1	0	5			
4 horses for carts		1	4	0			
14 lifters at 8*s.* do. 1½ acre per day		3	4	0			
Harrowing twice			4	2			
Carting tops		1	5	0			
Straw for pitting (1 ton for 6½ acres)			10	0			
Hogging up			5	0			
Sorting, bagging and weighing		4	0	0			
Delivery to station (6½ miles)		3	0	0			
Upkeep of fences			5	0			
Depreciation on and repairs to implements		1	0	0			
Interest on capital		1	0	0			
Management		1	10	0			
					18	7	7
Total					£38	17	0

Estimated crop : 6 tons seed and ware. Under average.

NOTE.—Nothing has been allowed for broken time, unremunerative work and general establishment charges, which would total at least £1 10*s.* per acre, making a total cost of £40 7*s.*

FARM No. 54.

County, LINCOLN.

Size of Farm: 300 acres. 230 acres arable. 70 acres pasture.
Soil. Typical wold.
System of Farming. Cropping and stock for manure. 4 course.
No. of Horses. 8.

HORSE LABOUR No. 17.

AVERAGE COST FOR KEEPING ONE HORSE FOR 1918-19.

	£ s. d.	£ s. d.
Foods: Aug. 14th to June 28th, 46 weeks.		
14lbs. crushed oats per day @ 2s. 1d. per stone	33 10 10	
12 st. linseed cake @ 21s. 10d. per cwt. ...	1 11 6	
8 cwts. seeds hay @ 7s. 9d. per cwt. ...	3 2 0	
10 cwts. roots @ 25s. per ton	12 6	
2 tons straw @ 25s. per ton	2 10 0	
June 29th to Aug. 13th, 6 weeks. grass @ 7s. 6d. per week	2 5 0	
		43 11 10
Labour of maintenance on horses.		
Man attends 6 horses,		
26 weeks @ 20 hrs. per week		
20 weeks @ 10 hrs per week @ 9d per hr.		4 10 0
Shoes and Shoeing. 3 new sets @ 8s. ...	1 4 0	
Removes	6 0	
		1 10 0
Harness		3 0 0
Stable equipment		10 0
Stable, rent, rates and repairs		1 0 0
Veterinary attendance and medicines ...		1 0 0
Depreciation, 10% on £90, average value		9 0 0
Interest on capital, 5% on £90 average value		4 10 0
Supervision and general expenses		10 0
Total cost		69 1 10

Average No. of working days 200.
Average cost per working day 7s.
Cost of men, 40s. 6d. per week or 7s. 3d. per day for 5½ day week
Cost of boys average 5s. per day.

BARLEY No. 15.

Previous Crop. Turnips,

COST OF PRODUCTION PER ACRE 1919 CROP.

	£ s. d.	£ s. d.
Rent		1 5 0
Rates		3 0
Manure. From turnips. 2 cwt. slag applied @ 3s. 9d.	7 6	
2 cwt. supers applied at 7s	14 0	
Charge ¾		15 4
One-third cost of cakes fed to sheep (per local scale), 9 sheep per acre @ 1 cwt. cake each @ £20 per ton		3 0 0
Seed. 3 bush @ 75s. per qr.		1 8 9
Cultivations.		
Ploughing, 2 horses, ¾ acre per day ...	1 6 8	
Dragging, 4 horses, 10 acres ,, ...	3 6	
Harrowing, 3 ,, 12 ,, ,, ...	2 4	
3 ,, 2 ,, 12 ,, ,, ...	4 6	
Drilling 2 ,, 12 ,, ,, ...	2 0	
Rolling 2 ,, 10 ,, ,, ...	2 0	
Weeding	4 0	
		2 5 0
Harvesting. Opening out	1 6	
Binding, 2 men and boy and 6 horses, 12 acres	5 0	
String, 6 cwt. do. 136 acres @ £6 5s. per cwt.	5 6	
Stooking and setting up stooks	2 0	
Carting, 7 men and 1 boy, and 4 to 5 horses, 10 acres	8 0	
Thatching, straw, pegs and string, &c. ...	2 0	
Extra for harvest money, double pay for 4 weeks	8 0	
		1 12 0
Threshing.		
Thresher £4 0 0		
Meals for 2 men 6 0		
Coals 7 cwts. @ 2s. 3d. ... 15 9		
8 men and 3 boys 1 10 0		
	9 11 9	
10 acres per day		19 2
Carting to station.		
45 qrs. per day, 3 horses and 1 man ...		2 9
Use of implements		10 0
Allow for broken time		10 0
Hedging, ditching and general expenses ...		5 0
Interest on capital		6 6
Management		15 0
		£13 16 9

Average yield, 32 bush grain.
15 cwts. straw

ROOTS. No. 10.
Previous Crop. Wheat.

COST OF PRODUCTION PER ACRE 1919 CROP.

	£ s. d.
Rent	1 5 0
Rates	3 0
Manure. 2 cwts. supers and 2 cwts. slag, charged against barley. (*See* barley, No. 15)	0 0
Seed. 2 lbs. @ 1s. 6d.	3 0
Cultivations.	
Two ploughings, 2 horses, ¾ acre per day	2 13 4
Four draggings, 4 ,, 10 acres ,, ...	14 0
Three rollings, 2 ,, 10 ,, ,, ...	6 0
Four harrowings, 2 ,, 10 ,, ,, ...	6 0
Drilling and manure	4 0
Three scarifyings	7 6
Chopping out	9 0
Hedging, ditching and general expenses	5 0
Use of implements	6 0
Broken time	5 0
Interest on capital	2 0
Management	10 0
Total cost	7 18 10

NOTE.—Above crop is consumed on the ground by sheep. (*See* mutton, No. 5).

MUTTON No. 5.

COST OF MUTTON PRODUCTION, 1919-20.

	£ s. d.
Aug. 14. 63 Linc, Hamps. hoggets @ 51s. each ...	160 13 4
Buying expenses	5 0
10 weeks keep on eddish—62 sheep @ 6d. per head per week (one died)	15 10 0
Cake and corn for same period. ½ lb. per head per day @ £22 per ton. Charge ½	10 11 4
20 weeks on turnips—	
7 acres turnips @ £7 18s. 10d. per acre	55 11 10
½lb cake and corn per head per day @ £22 per ton charge ½. Average number 60	30 18 9
Allow for hay in frosty weather	2 0 0
Labour costs	18 0 10
Dipping—labour and materials	13 0
Use of fencing, troughs, hurdles, and other equipment	3 10 0
Interest	4 2 6
Management	3 0 0
Total cost	304 16 7
Less 3 casualties @ 10s.	1 10 0
	£303 6 7

Probable dead weight when sold (from 30 years experience) —65 lbs. each = 3,900 lbs.
Cost per lb.—1s. 6¾d., less value of skins, 16s. each.
Net cost per lb.=1s. 3¾d.

FARM No. 55.

County, CHESHIRE.
OATS.—No. 12.

COST OF GROWING 31 ACRES OATS—1918 CROP.

	£ s. d.	£ s. d.
Rent. £77 10s., rates £12		89 10 0
Seed. At actual cost		57 0 0
Cultivations.		
Ploughing—per contract	38 15 0	
Harrowing ,, ,, ...	15 10 0	
Rolling ,, ,, ...	1 13 0	
Sowing by hand	3 2 0	
		62 0 0
Harvesting.		
Cutting	18 0 0	
String—1½ cwts. @ 100s.	7 17 6	
Stooking	21 0 0	
Carting and stacking (in sheds)	45 12 3	
Keep of 2 army horses—10 weeks @ £1 (bad weather)	10 0 0	
		102 9 9
Threshing—Account (including carting to station)	26 19 6	
Extra men	19 15 8	
Meals for 13—5 days	1 12 6	
		18 7 8
Use of implements	1 11 0	
General expenses, hedging, etc.	1 18 0	
Interest on capital	10 0 0	
Management	31 0 0	
		17 9 0
Total ...		406 16 5
Add allowance for straw taken off—44 tons @ 12s. ...		26 8 0
Total cost ...		£433 4 5
Cost per acre ...		£14 0 0

Actual yield per acre: 10¾ bush. grain.
24 cwts. straw.

NOTE.—This was a field broken up for war cropping and the most of the charges are actual costs. No manure was applied, but the field was of course "dilapidated"—hence the charge for straw taken off, which is very moderate.

FARM No. 56.

County, ESSEX.

Size of Farm : 400 acres.

Soil : Good medium.

System of Farming : Four course cropping.

WHEAT No. 33.

No. of acres wheat in 1919 : 96.

COST OF PRODUCTION PER ACRE AFTER CLOVER LEA, 1919 CROP.

(Horse labour @ 6*s*. 3*d*. per day.)

	£	*s*.	*d*.
Rent and rates		1 17	6
Manure, 12 loads (17 cwt.) @ 10*s*. per load, applied		6 0	0
Seed, 2½ bush. @ 80*s*. per qr.		1 5	0
Cultivations.			
Ploughing, ⅘ths acre per day	1 1 10		
Roll and harrow four times	8 0		
Drilling	3 6		
Harrow twice	4 0		
Twice harrow and roll in spring	6 0		
Docking and thistling	6 9		
		2 10	1
Harvesting.			
Cutting, including string	1 0 0		
Shocking	3 0		
Carting and stacking	12 0		
Thatching	3 0		
		1 18	0
Threshing, 1*s*. 2*d*. per sack	9 4		
Labour costs	8 0		
		17	4
Carting to station or mill		4	0
Use of implements and machinery		10	6
Broken time		5	6
General expenses		6	0
Interest on capital		11	0
Management		15	0
Total cost		£16 19	11

Average yield : 32 bush. grain.
25 cwt. straw.

NOTE.—Nothing carried forward from dung, as only light dressing given, and no artificials applied. Medium soil.

POTATOES No. 13.

AVERAGE COST PER ACRE 1919 CROP.

(Horse labour @ 6*s*. 3*d*. per day.)

	£	*s*.	*d*.
Rent and Rates		1 17	6
Manure.			
16 loads dung @ 10*s*., applied	8 0 0		
5 cwt. supers @ 7*s*.	1 15 0		
1½ cwt. sulphate of ammonia	1 7 0		
		11 2	0
Seed, about 1 ton on average (15—25 cwt.) per acre		10 0	0
Cost £8 and £2 for carriage and labour.			
Cultivation.			
Two ploughings	2 6 0		
One spring ploughing	1 3 0		
One cultivating	4 0		
One harrow	2 0		
One baulking	9 0		
Planting	10 0		
Splitting baulks	9 0		
Rolling and harrowing down	4 0		
Scuffling once	9 0		
Moulding up	9 0		
Harrowing down	2 0		
Scuffling	9 0		
Hand hoeing	6 9		
Scuffling	9 0		
Moulding up	9 0		
		8 0	9
Spraying, twice		1 10	0
Harvesting.			
6 horses @ 6*s*. 3*d*.	1 17 6		
1 man with digger	6 9		
3 men with carts	1 0 3		
18 pickers @ 5*s*.	4 10 0		
2 men at clamp	13 6		
Straw	15 0		
Foreman	7 0		
Final earthing and strawing	5 0		
		9 15	0
Lift, 2 acres per day		4 17	6
Carried forward		47 2	9

	£	*s*.	*d*.
Brought forward		47 2	9
Dressing and marketing.			
Dressing @ 3*s*. per ton	18 0		
Extra for seed	5 0		
Carting, 3 miles	1 10 0		
		2 13	0
Use of implements and machinery		12	6
Broken time		9	0
General expenses		5	0
Interest on capital		1 5	0
Management		18	0
		£53 5	3
Deduct for cleaning	3 0 0		
„ „ manurial residue	4 0 0		
		7 0	0
Total		£46 5	3

Average yield seed and ware may be estimated at 6 tons, more or less, according to season.

FARM No. 57.

County, NORFOLK.

Soil : Typical light land.

BARLEY No. 16.

AVERAGE COST PER ACRE, 1918 CROP.

	£	*s*.	*d*.
Rent and rates		1 2	0
Manure, proportion from sheep folds		3 10	0
Seed		1 10	0
Cultivations.			
Ploughing	1 3 0		
Two rollings	2 4		
Three harrowings	6 6		
Drilling	4 0		
Weeding	3 0		
		1 18	10
Harvesting, including string		1 10	6
Threshing, including coals		18	0
Carting to station		4	0
Implements and machinery		9	0
Broken time		14	0
Hedging, ditching, and general expenses		7	6
Interest on capital		6	0
Management		10	0
		£12 19	10

Average yield : 24 bush. grain.
15 cwts. straw.

OATS No. 13.

Previous Crop : Roots.

AVERAGE COST PER ACRE, 1918 CROP.

	£	*s*.	*d*.
Rent and rates		1 2	0
Manure.			
Proportion from sheep folds		1 10	0
4 cwts. supers and S/A mixture		1 19	0
Seed.			
4 bushels per acre @ 6*s*. 6*d*.		1 6	0
Cultivations.			
Ploughing	1 3 0		
2 rollings	2 4		
3 Harrowings	6 6		
Drilling	4 0		
Hand hoeing	3 0		
		1 18	10
Harvesting.			
Labour per contract	1 0 0		
String	3 6		
Horse labour	7 9		
Materials for thatching	2 9		
		1 14	0
Threshing and coal		19	6
Carting to station, 2 miles		4	6
Use of implements and machinery		9	0
Broken time		14	0
Hedging and ditching and general expenses		7	6
Interest on capital		6	0
Management		10	0
		£13 0	4

Average yield, 40 bushels per acre grain.
„ „ 24 cwt. „ „ straw.

FARM No. 58.

County: CAMBRIDGE.

Size of Farm: 1,400 acres of light land.
System of farming: Four course.

WHEAT No. 34.

FIRST YEAR—WHEAT.

NOTE:—Horse labour taken at 10*s.* per productive day's work: man labour at current rates.

	Cost per acre, 1919. £	*s.*	*d.*
Eight loads of farmyard manure @ 8*s.* per load ...	3	4	0
Carting and spreading same		14	0
Value of sheep manure left after folding crop ...		10	0
Ploughing with tractor (local hiring cost)	1	5	0
Rolling, two horses and man doing 8 acres per day		3	3
Harrowing twice		6	0
Seed, 2¼ bushels	1	3	0
Smut dressing and man's time using		1	0
Drilling, 3 horses and 2 men		4	6
Harrowing		3	0
Share of crow scaring		1	0
Share of cost of hedging, very little ditching required		1	0
Rent and Rates		15	0
Rolling in spring		3	0
Spudding		7	6
Wear and tear of implements and tradesmen's bills	1	15	0
Harvesting		17	0
Binder twine		3	5
Thatching, on the basis of a 10 yard stack off 10 acres @ 2*s.* per yard		2	0
Thatching twine			4
Threshing at contract price of 4*s.* 8*d.* per qr. and on the basis of 7 sacks per acre		16	4
Delivery to station at price of 6*d.* per sack		3	6
Interest @ 5% on £15 capital		15	0
Share of management, expenses, foreman, &c., on the basis of £400 a year on 1,400 acres		5	6
	£13	19	4

Average yield, 1919, 24 bushels grain.
Do. do. 15 cwts. straw.
Average yield, over 5 years, 38 bushels grain.
Do. do. do. 16 cwts. straw.

SECOND YEAR—ROOT CROP.

ROOTS No. 11.

	Cost per acre, 1919. £	*s.*	*d.*
Twice ploughing with tractor	2	10	0
Dragging. 4 horses and a man to do 8 acres ...		6	8
4 horse handle harrows, do. do. ...		6	8
Harrowing twice		6	0
Rolling		3	0
Forking up and burning weed		6	1
5 cwts. superphosphate @ £6 19*s.* 6*d.*	1	14	10
Cost of turnip seed, @ 2*s.* per lb., 3 lbs. per acre ...		6	0
Ploughing as above	1	5	0
Harrowing twice		6	0
Flat roll		2	0
Drilling, 8 acres per day		5	8
Harrowing behind drill		3	0
Flat roll, second time		2	0
Horse hoeing. Man, boy and 1 horse doing 5 acres		3	8
Hand hoeing, twice	1	10	0
Horse hoeing, second time		3	8
Wear and tear of implements and tradesmen's bills	1	15	0
Rent and rates	1	5	0
Interest on capital, 5% on £15		15	0
Share of cost of hedging		1	0
Share of cost of management		5	6
	14	1	6
Charge to sheep	3	0	0
	£11	1	6
Charge to barley	£7	0	0
„ „ seeds	4	1	6

THIRD YEAR—BARLEY.

BARLEY No. 17.

	Cost per acre, 1919. £	*s.*	*d.*
Value of sheep manure left after folding roots ...	1	0	0
Share of cost of root crop	7	0	0
Ploughing	1	5	0
Harrowing twice and rolling once		9	0
Seed, 3 bushels per acre	1	8	0
Drilling		4	9
Harrowing and rolling		6	0
Spudding		7	6
Rent and rates	1	5	0
Share of hedging		1	0
Share of crow scaring		1	0
Wear and tear of implements and tradesmen's bills	1	15	0
Carried forward	15	2	3

	£	*s.*	*d.*
Brought forward	15	2	3
Harvesting		17	0
Binder twine		3	5
Thatching		2	0
Thatching twine			4
Threshing		16	4
Delivery to station		3	6
Share of management		5	6
Interest on capital, 5% on £15		15	0
Total	£18	5	4

Average yield, 1919, 24 bushels grain.
Do. do. 10 cwts. straw.
Average yield, over five years, 29 bushels grain.
Do. do. do. 12 cwts. straw.

FOURTH YEAR—SEEDS (SAINFOIN).

SEEDS HAY No.

	Cost per acre, 1919. £	*s.*	*d.*
Brought forward from roots	4	1	6
Seed, 1 sack of sainfoin, 50*s.*, drilling, 4*s.* 9*d.* ...	2	14	9
Rolling in the spring		3	0
Rent and rates	1	5	0
Share of hedging		1	0
Cutting hay on basis of 2 horses and 1 man doing 10 acres		3	0
Horse raking, 1 horse and 1 man doing 10 acres ...		1	9
Carting and stacking. (NOTE.—This may be cheaper or more expensive according to weather conditions)		12	6
Wear and tear of implements and tradesmen's bills	1	0	0
Thatching		2	0
Share of management		5	6
Interest on capital, 5% on £15		15	0
	£11	5	0
Less value of aftermath for sheep		15	0
Net cost	£10	10	0

Average yield: 1 ton per acre.

FARM No. 59.

County: CAMBRIDGE.

FAT CATTLE ACCOUNT.

BEEF No. 9.

	£	*s.*	*d.*
November 26th, 1918.			
Bought 22 beasts at £25 10*s* each	561	0	0
Rail expenses	4	16	0
Cost of labour, 80 weeks at 38*s.* 6*d.*	57	15	0
Cost of linseed cake at £19 per ton	95	0	0
Cost of meal, 105 sacks at 32*s.* per sack	168	0	0
Cost of mangolds, 6 acres at £15 (see below) ...	90	0	0
Interest on capital	17	10	0
Establishment charges	17	10	0
	£1,011	11	0
May 3rd, 1919.			
One beast went wrong—had to have it killed—only made	10	0	0
May 16th to June 25th.			
Sent a few each week between these dates to Mr. R. Simpson's auction, Newmarket; they made altogether	925	6	4
	£935	6	4
Expenditure	1,011	11	0
Receipts	935	6	4
Deficit	£76	5	8

Straw put against manure.

COST OF GROWING MANGOLDS.—1918.

Per acre.	£	*s.*	*d.*
Rent	1	10	0
Rates at 1*s.* 8*d.*		2	6
Ploughing, three times	3	0	0
Seed at 2*s.* 6*d.* per lb.		17	6
Manure (special mangold), 6 cwts. at 10*s.*	3	0	0
Harrowing, three times, at 3*s.*		9	0
Rolling, twice at 1*s.* 6*d.*		3	0
Drilling at 4*s.*		4	0
Hoeing (side) at 12*s.*		12	0
Setting out at 12*s.*		12	0
Hoeing, second time, at 12*s.*		12	0
Horse hoeing, three times at 3*s.*		9	0
Lifting at 22*s.*	1	2	6
Carting and reeking at £3	3	0	0
Total cost per acre	£15	13	6

FARM No. 60.

County, SOMERSET.

Size of Farm : 153 acres arable. 217 acres grass.
Soil : Medium to clay.
Systen of Farming. Cropping and stock breeding and feeding.

NOTE.—The following costs are based upon men at an average of £2 per week and horses at 7*s.* per working day.

WHEAT No. 35.

COST OF GROWING WHEAT PER ACRE, 1918 CROP.

	£ s. d.	£ s. d.
Rent		1 0 0
Local Rates		3 6
Manure. ¼ part of slag used for hay	7 0	
1 cwt. sulphate of ammonia	1 0 0	
		1 7 0
Seed. 2½ bushels per acre @ 10*s.* per bushel	1 5 0	
Dressing ditto.	1 0	
		1 6 0
Hauling headlands		1 0 0
Ploughing. 3 horse, man and boy, doing ¾ acres per day		2 8 0
Dragging, 3 times with 3 horses, 8 acres per day		13 0
Drilling 5 horses and 2 men, 8 acres per day		5 6
Harrowing, twice, 2 horses, 8 acres per day		6 0
Rolling, twice, 2 horses, 8 acres per day		6 0
Weeding		15 0
Harvesting.		
Cutting. 6 horses and 2 men cutting 10 acres per day		9 0
Binder and twine		7 9
Stitching		2 6
Carrying, stacking, &c., 5 horses and 6 men carrying, 9 acres per day		13 4
Thatching.		
Reeds and spars		10 0
Threshing.		
Machine 60*s.*, trusser and moving 15*s.*, twine 28*s.* 6*d.*, coal 24*s.* 6*d.*, 10 men at 8*s.*, machine men at 5*s.*, doing 10 acres per day		1 1 0
Marketing.		
Hauling to station, &c.		5 6
Hedging and Ditching		6 6
Proportion of cost of cleaning brought forward from root crop		2 8 10
Interest on outlay 5 %		15 9
Management		1 0 0
Total cost		£17 10 2

Average yield grain, 4 qrs. per acre. 28 cwts. straw.

MANGOLDS No. 9.

COST PER ACRE FOR MANGOLDS, 1918 CROP.

	£ s. d.	£ s. d.
Rent		1 0 0
Rates		3 6
Farm yard manure, 20 loads to acre	4 0 0	
Man and 2 horses, 3 days	3 6 0	
Spreading	5 0	
Proportion charged two-thirds		5 0 4
4 cwt. mangold manure @ 8*s.*	1 12 0	
Hauling and Spreading ditto	2 0	
charge ¼		1 5 6
Seed, 6lb. @ 3*s.*		18 0
Ploughing, twice, 3 horses, man and boy		4 16 0
Cultivating, once, 4 horses		7 0
Dragging, 3 times, 3 horses		13 0
Rolling, twice, 2 horses		7 0
Drilling, 2 horses, 2 men		4 0
Harrowing, 2 horses, 1 man		3 0
Rolling, 2 horses, 1 man		3 0
Horse hoeing, twice		16 0
Singling and hand hoeing twice, 5 days to acre first time, 3 days second		2 0 0
Sifting and cleaning		1 5 0
Hauling, horse and man, 4 days in field		2 16 0
Pitting and covering, 1 man, 2 days in field		10 0
Ditching, Hedging, etc.		6 6
Interest on capital @ 5 %		15 0
Management		1 0 0
Total cost		£24 8 10
less share of cleaning		2 0 10
		£22 8 0

Average yield per acre, 20 tons.

SEEDS HAY No. 12.

COST OF PRODUCTION PER ACRE OF CLOVER HAY, 1918 CROP.

Number of years under hay : 1.
Year in which seed sown : 1917.
Corn roots and Corn three previous years.
Root crop fed on premises.
Part of field Mangold and part Swede.

	£ s. d.
Rent and Rates per acre	1 3 6
Grass seeds	1 8 0
Sowing, harrowing and rolling	6 9
Cost of manure, 25% of manure applied for root crop	1 3 6
5 cwt. of Basic Slag, hauling and sowing same	1 7 6
Rolling	3 6
Cutting, making and stacking	1 10 0
Thatching Reeds and Spars	7 6
Proportion of cost of cleaning carried forward	2 8 10
Interest on outlay @ 5%	10 0
Management	1 0 0
	£11 9 1
Deduct value of after grass	1 10 0
NET COST	£9 19 1

Yield per acre 25 cwt.
Average yield about 22 cwts.
Condition of soil, clay and stone brash, about 20 acres sown.
1918 fair season for hay, rather above average.

FARM No. 61.

County, HANTS.

Size of Farm : 90 acres arable ; 45 acres pasture.
Wheat growing on Brick-earth, wet in winter, flat. After Potatoes and Turnips (6 acres), Mangels (11 acres), and Clover (14 acres).

WHEAT No. 36.

AVERAGE COST PER ACRE OF 31 ACRES — 1919 CROP.

	£ s. d.	£ s. d.
Rent	1 16 6	
Rates	5 0	
		2 1 6
Manures—Average net cost, including unexhausted Manure from roots, etc.		2 0 0
SEED : 3 bush. @ 10*s.*		1 10 0
Cultivations.		
Ploughing	1 5 0	
Pressing and drilling (press drill)	10 0	
Harrowing—7 times	14 0	
Rolling	2 0	
Weeding	2 0	
		2 13 0
Harvesting.		
Binding, including twine	18 0	
Stooking	2 6	
Carting and stacking	9 0	
Thatching	2 0	
		1 11 6
Threshing.		
7½ sacks @ 1*s.* 3*d.*	9 1	
6 men	5 0	
Coal and water	1 9	
		15 10
Carting to station		7 6
Hedging and ditching		2 0
Implements—included above		
General Expenses		5 0
Interest on capital		8 6
Management		1 0 0
Average Yield—1919—29 bush. grain 16 cwts. straw.		£12 14 10
Ditto — over 5 years—32 bush. grain. 18 cwts. straw.		

OATS (WINTER) No. 14. After Barley, Peas and Tares.

AVERAGE COST PER ACRE OF 15¼ ACRES—1919 CROP.

	£ s. d.	£ s. d.
Rent and Rates		2 1 6
Manure.		
1 cwt. sulp. amm.	16 3	
Carting and breaking	2 0	
		18 3
Seed : 4 bush. @ 75*s.* per qr.		1 17 6
Cultivations.		
Tractor Plough (hired)	1 12 6	
(2) Tractor cultivator (hired)	1 0 0	
Drilling, 2 horses, 3 men	4 0	
6 harrowings	12 0	
Rolling	2 0	
		3 10 6
Carried forward		£8 7 9

Farm No. 61—*continued.*

	£	s.	d.
Brought forward	£8	7	9
Harvesting.			
Binding 18 0			
Setting up 2 6			
Carting and stacking 9 0			
Thatching 2 0			
	1	11	6
Threshing.			
13 sacks @ 1*s.* 13 0			
6 men 6 0			
Coal and water 2 0			
	1	1	0
Carting to station		7	6
General Expenses		7	0
Interest on Capital		6	0
Management	1	0	0
Total	£13	0	9

Yield—1919 ... ... 52 bush. grain.
25 cwt. straw.
Ditto—over 5 years ... 40 bush. grain.
21 cwt. straw.

POTATOES No. 14.

AVERAGE COST PER ACRE OF 3 ACRES—1919 CROP.

	£	s.	d.
Rent	1	16	6
Rates		5	0
Artificial Manure.			
10 cwt. Fison's	5	16	8
1½ cwt. sul. ammonia	1	5	0
2 cwt. Kainit		15	0
Sowing Manure		2	6
Seed.			
½ ton @ £13	6	10	0
Planting		13	4
Cultivations.			
Traction ploughing (hired)	1	12	6
„ cultivating (hired)		12	0
Horse ploughing 4 times	4	0	0
Couching	1	0	0
Rolling, 10 times		15	0
Harrowing, 20 times	1	10	0
Hand hoeing	1	10	0
Horse „		6	8
Earthing up		6	8
Lifting	5	0	0
Ditching and hedging		2	0
Interest and Management	1	10	0
	35	8	10
Deduct half costs cleaning	5	13	1
Net cost	29	15	9

Yield—4 tons seed and ware—1919.
Average yield over 5 years—5 tons seed and ware.

MANGELS No. 10.

AVERAGE COST PER ACRE—1919 CROP.

	£	s.	d.
Rent	1	16	6
Rates		5	0
Farmyard Manure, 15 tons two-thirds price	3	11	10
Artificial Manure.			
7 cwt. basic slag	1	8	0
12½ cwt. Fison's Special	7	5	3
2 cwt. sul. ammonia	1	13	0
1 cwt. salt and nitrate of soda		15	6
Seed : 8 lbs. acre—2*s.* 6*d.* lb.	1	0	0
Cultivations.			
Ploughing, 1st time	1	5	0
„ 2nd and third times	2	0	0
Harrowing—12 times	1	4	0
Rolling—7 times		14	0
Cultivating twice, 3 horses		10	0
Drilling mangels (2 horses, 3 men)		3	6
Carting and sowing manure		10	0
Flat hoeing	1	10	0
Singling	1	10	0
Flat hoeing, 2nd time	1	5	0
Horse hoeing, single horse hoe		5	0
Lifting, estimated	1	0	0
Carting, „	1	10	0
Ditching and hedging		2	0
Interest and Management	1	10	0
	32	13	7
Deduct half of cleaning costs	2	16	6
Net cost	29	17	1

Yield 20 to 25 tons.
Average of 5 years—20 tons.

FARM No. 62.

County, LANCS.
Size of Farm : 120 acres arable. Soil : good strong loam.
System of Farming : Cropping and sale of crops.

POTATOES No. 15.

AVERAGE COST PER ACRE OF 16 ACRES, 1919 CROP.

	£	s.	d.	£	s.	d.
Rent (subject to increase of 10*s.* per acre)				2	0	0
Rates 7*s.* 11*d.*, tithes 2*s.* insurance 1*s.* 6*d.*					11	5
Manure.						
20 tons per acre, town manure at farm	18	0	0			
Applying same (4 men and 2 horses) ...	2	17	0			
Artificials, 1 cwt. S/A, 3 cwt. supers applied	1	19	4			
				22	16	4
Seed.						
15 cwt. Scotch seed @ £10 10*s.* ...	7	17	6			
Labour and shrinkage in sprouting ...	1	0	0			
Cutting sets and dropping	1	11	6			
				10	9	0
Cultivations.						
Ploughing, light	1	0	0			
Ploughing, deep	1	15	0			
Cultivating and harrowing		17	6			
Drilling and covering	1	5	0			
Scarifying two to three times	1	5	0			
Drilling up same	1	5	0			
Harrowing and rolling	1	2	6			
Hoeing and weeding		19	0			
				9	9	0
Harvesting.						
One man, 2 horses, 6 pickers	4	5	6			
Carting and hogging, including straw (3 men and 2 horses, straw, 4*s.*)	2	13	6			
Extra covering for winter		4	0			
				7	3	0
Marketing.						
Dressing and loading, 5 men	2	7	6			
Carting 2 miles	1	5	6			
				3	13	0
Lime, 30 cwt. per acre @ 30*s.* per ton charge one-fifth					9	0
Use of implements and machinery, baskets, &c.				2	0	0
Interest on capital @ 5%				1	5	0
Management and establishment charges...				2	2	0
Total				£61	18	9
less unexhausted manure	9	0	0			
„ share of cleaning ...	1	0	0			
				10	0	0
Yield 6¼ tons. Net cost				£51	18	9

Average yield, 9 tons seed and ware.

NOTE.—"Establishment charges" includes management, cleaning ditches and drains, hedging and fencing, broken time and unremunerative horse and man labour, joiner's bills, painting woodwork, &c., road mending, office expenses and share of upkeep of pony and trap, &c.

OATS No. 15.

COST PER ACRE OF 21 ACRES, 1919 CROP.

	£	s.	d.	£	s.	d.
Rent, £2 ; rates, 7*s.* 11*d.*; tithes, 2*s* insurances, 1*s.* 6*d.*				2	11	0
Lime, proportion as for potatoes					9	6
Manure, ¼ cwt. S/A 8*s.* 3*d.*, 3 cwt. supers 19*s.* 6*d.*, applying 3*s.* 4*d.*				1	11	1
Seed, 5 bushels per acre				2	2	0
Cultivations.						
Ploughing	1	12	6			
Harrowing 3 times		8	6			
Sowing		4	9			
Rolling		2	4			
				2	8	1
Harvesting.						
Cutting and binding, 3 horses, 1 man...		14	9			
Boy, 5-6 acres per day ; string 6*s.*						
Stooking and resetting		6	0			
Carting and stacking		15	3			
Thatching and materials		8	0			
				2	4	0
Threshing : 6 acres per day, machine £6, wages £4 10*s.*, coal £1				1	12	9
Carting grain and straw to station and loading					17	6
Upkeep of machinery and implements ...				1	0	0
Interest on capital					8	0
Establishment charges, including management				1	15	0
Total cost				£16	19	7

NOTE :—On the average at least £1 per acre should be added for manure applied to previous crops.

Average yield : 46 bush. Grain.
23 cwt. Straw.
Estimated yield 1919 : 35 bush. Grain.
18 cwt. Straw.
(Straw to be credited £3 ton.)

Farm No. 62—*continued.*

SEEDS, HAY No. 13.

AVERAGE COST PER ACRE OF 40 ACRES—1919 CROP.

	£	s.	d.
Rent, rates, tithes and insurances	2	11	5
Manure: Brought forward from wheat (after potatoes)	2	10	0
1 cwt. S./A., 16*s.* 6*d.*: 4 cwts. supers.; 26*s.*; 5 cwts. slag, 15*s.*; and application, 4*s.* 6*d.*	3	2	0
Seed: Cost in 1918 (1919, £2 10*s.*)	1	14	0
Sowing		1	0
Harrowing and rolling		4	0
Share of cost of liming		9	6
Spring rolling		2	0
* Cutting and gathering, man labour, £1 17*s.* 6*d.*: horse labour, 15*s.*	2	12	6
Thatching		8	0
Delivered f. o. r. trussed or baled	1	0	0
Upkeep of machines and implements	1	5	0
Interest on capital—5%		10	0
Establishment charges, including management	1	15	0
Total	£18	4	5

Average yield: 40 cwts. per acre (two cuts).
" " 1919, 36 cwts. " "

* Reckoned on basis of 5 weeks for 40 acres. Six men and 1 boy, horseman @ 50*s.*, labourers @ 46*s.* and 1*s.* 6*d.* per hour overtime, tea 3 times per day, house, bedding and coal for labourers. Cost increased on account of daylight saving and overtime.

[NOTE.—This is an example of a small farm run on intensive cropping lines, the farmer being a very capable and keen business farmer.—J.W.]

FARM No. 63.

County. SALOP.

Size of Farm: 241 acres, arable; 172 acres, pasture; 42 acres other land.
Soil: Red loam. Some peaty meadows.
System of Farming: Cropping and feeding.

WHEAT No. 37.

AVERAGE COST PER ACRE OF WHEAT AFTER CLOVER LEA—1918 CROP.

Man and two horses at 21*s.* per day

	£	s.	d.	£	s.	d.
Rent				2	10	0
Rates					5	2
Manures: 10 tons dung @ 10*s.*	5	0	0			
Application and spreading	1	0	0			
Charge				5	0	0
1½ cwts. sulp. amm. and 1 cwt. salt.	1	8	2			
Carting, mixing and sowing		3	0			
				1	11	2
Seed: 2½ bush. per acre—including cost of picking				1	17	6
Cultivations.						
First ploughing	1	5	0			
2 harrows		4	0			
Drilling, 3 horses, 1 man and 1 boy		3	0			
Harrowing, 3 horses		2	6			
Two harrowings in spring		4	0			
Rolling, 3 horses		4	0			
Weeding		5	0			
				2	7	6
Harvesting.						
Opening round, cutting and string		12	6			
Shocking		4	0			
Carting, stacking and thatching		19	6			
				1	16	0
Threshing, including string and coal				1	4	0
Carting to station—3 miles					10	0
Use of implements and machinery					9	6
General Expenses					7	6
Interest on Capital—5%					12	0
Management					15	0
Total cost				£19	5	4

Yield per acre. 1918. 41 bush. grain. Estimated yield.
30 cwts. straw. 1919 crop—26 bush.
Average yield over 5 years, 30 bush. grain.
25 cwts. straw.

BARLEY.—No. 18.

AVERAGE COST PER ACRE OF BARLEY—1918 CROP.

	£	s.	d.	£	s.	d.
Rent				2	10	0
Rates					5	2
Manure: 1 cwt. sulp. amm.—4 cwts. bone meal per acre, including labour costs				3	6	6
Proportion from sheep folding				1	0	0
Seed: bush. per acre, including packing						
Cultivations.						
Ploughing, 2 hours	1	10	0			
3 harrows		9	0			
One light and one heavy roll		5	0			
Drilling		3	0			
Weeding		3	0			
				2	10	0
Carried forward				9	11	8

				£	s.	d.
Harvesting. Brought forward				9	11	8
Opening round, cutting, including string			11	6		
Shocking			4	6		
Carting, stacking and thatching			17	6		
				1	13	6
Threshing				1	1	0
Carting to station—3 miles					10	0
Use of implements and machinery					9	6
General Expenses					7	6
Interest on Capital—5%					7	0
Management					15	0
Total				£14	15	2

Yield per acre, 1918—40 bush. grain, 16 cwts. straw.

POTATOES.—No. 16.

AVERAGE COST PER ACRE OF POTATOES—1918 CROP.

	£	s.	d.	£	s.	d.
Rent				2	10	0
Rates					5	2
Manure: 10 tons dung @ 10*s.*	5	0	0			
Carting and spreading	1	0	0			
				6	0	0
Artificial: 9 cwts. per acre, compound manure and application				5	2	6
Seed. Scotch				7	12	6
Cultivations.						
Ploughing, 3 hours	2	0	0			
Cultivating, 6 hours		15	0			
Rolling		3	6			
Harrowing		3	0			
Cultivating again		15	0			
Rolling "		3	6			
Harrowing "		3	0			
Planting seed and carting		14	0			
Ridging 3 times	1	4	0			
Scuffling do	1	1	0			
Hoeing and weeding		15	0			
				7	17	0
Harvesting.						
Digging and picking	4	15	0			
Carting and straw for clamps	1	2	0			
				5	17	0
Marketing.						
Sorting and bagging	3	0	0			
Carting 3 miles	4	8	0			
				7	8	0
Use of machinery and implements					12	6
General Expenses					7	6
Interest on Capital—5%				1	2	6
Management				1	10	0
Total Cost				46	4	8
Deduct share of cleaning costs	1	0	0			
" " manuring "	2	0	0			
				3	0	0
Net cost				£43	4	8

Average yield 1918—7 tons ware, 1 " seed, ¼ " chats } over 10 acres.

BEEF.—No. 10.

NOTE. All the cattle in these two lots throve well.

(A)	£	s.	d.
21st March, 1918.			
Bought 8 S.H. bullocks @ 75*s.* per cwt.—6½ cwts. @ £24 7*s.* 0*d.*	194	16	0
Buying expenses	2	0	0
4 lbs. linseed and feeding-cake per head per day for 6 weeks	11	4	0
33 weeks at grass @ 5*s.* per week each	66	0	0
Attendance @ 6*d.* per day	5	15	0
Marketing expenses	1	0	0
Interest on Capital 5%	7	0	0
Management	2	0	0
Total cost	£289	15	0

[Manure direct to grass.]

7th Nov. 1918.
Live weight of cattle when sold ... 76 cwts.
Cost per cwt. live weight ... 76*s.* 3*d.*

(B)	£	s.	d.
11th Oct., 1918.			
Bought 12 Hereford bullocks @ 74*s.* per cwt. 8 cwt. @ £29 12*s.* 6*d.*	355	10	0
3 weeks at grass @ 3*s.* per week each	5	8	0
20 " in yards	168	0	0
Labour—one-half man's time @ 34*s.* per week	17	0	0
Buying and selling expenses	3	0	0
General expenses, including use of machinery	2	10	0
Interest on Capital 5%	9	0	0
Management	3	0	0
	£563	8	0
Deduct 50 tons manure @ 10*s.*	25	0	0
Net cost	£538	8	0

19th March, 1919.
Live weight of cattle sold 120 cwts.
Cost per cwt. live weight 89*s.* 8*d.*

FARM No. 64.

County, LINCOLNSHIRE.

[The statements from this farm have been prepared from actual records of expenditure with the highest possible degree of accuracy. The farmer is a young man locally recognised for his skill in farm management and his shrewdness in business affairs. J.W.]

DISTRIBUTION OF CHARGES.

Farm 306 acres. 206 Arable. 94 Grass. 5 Roads and hedges. 1 Building. 40 Cattle. 10 horses. 200 Sheep.

The Management Charge of £250 per annum is divided as follows:—

£1 per acre on arable land ... (Potatoes, &c., are grown.)	£200	per annum.
£25 for all the grass	£25	,,
£25 ,, stock	£25	,,
	£250	,,

This Management Charge could be further apportioned among the crops according to the amount of managing due to each, such as more to potatoes and less to grazing seeds; it would then need further subdividing according to the acreage grown of each crop. This acreage is not constant, so the cost of a full rotation is more accurately arrived at by allowing £1 per acre per annum to all the arable land.

£1 per acre is apportioned to 20 acres hay, £5 to the rest of the grass = £25.

	£	s.	d.
10s. per horse per annum is apportioned ...	5	0	0
⅛ of the £25 is apportioned to cattle in winter	6	5	0
⅛ ,, ,, ,, summer	3	2	6
Rest of stock	10	12	6
	£25	0	0

Fencing Charges.—Average sized field is 15 acres with 25 chains of hedges to lay at 7s. per chain, once in 5 years, 175s. = 35s. per annum. Trimming every 2 years at 9d. 25 × 9, 18s. = 9s. per annum.

Total, 44s. per annum, *i.e.*, nearly 3s. per acre per annum.

N.B.—2s. per acre only is charged, as, if the hedges were properly attended to, they could probably be laid for 5s. to 5s. 6d. per chain.

Dykes.—Where there are dykes, 25 chains at 6s. per chain every four years = 2s. 6d. per acre per annum.

Rent, £395.—Rates for April, 1919, half-year ... £40 16 6

Apportioned as follows (approx.):—

		Rent. £	s.	d.	Rates. £	s.	d.
Farm-house (foreman)		15	0	0	4	0	0
Waggoner's house		7	0	0	2	0	0
Garthman's house		7	0	0	2	0	0
Stables, £6 ... ... Cattleyards and buildings used for feeding cattle, £32 ...		40	0	0	8	0	0
Remainder, £2							
47 acres grass at £2 10s. ...	117 0 0 at 10s.				24	0	0
47 ,, ,, £1 8s. ...	65 0 0 at 5s.				12	0	0
6 ,, roads, hedges and buildings							
20 ,, arable at 5s.	5 0 0 at 1s.				1	0	0
186 ,, ,, 15s.	139 0 0 at 3s.				28	0	0
306	£395	0	0		£81	0	0

INCIDENTALS (General Expenses).

	£	s.	d.
National Health Insurance, 9 men at 13s. each per annum	5	17	0
Employers' liability insurance, stock and crop insurance	40	13	9
Stamps, telegrams, adverts. for men, &c., stationery	14	0	0
Hire of sacks	4	0	0
	£64	10	9

Apportioned as follows:

200 acres arable at 5s. ...	£50	0	0
100 ,, grass at 2s. 6d. ...	12	10	0
Stock	2	0	9
	£64	10	9

NOTE.—No allowance has been made for part use of pony and trap or motor car.

DEPRECIATION AND UPKEEP OF IMPLEMENTS.

(Wear and tear.)

	£	s.	d.
Tradesmen's bill for repairs, and general upkeep	44	0	0
Plough shares and parts and dead stock purchases	6	5	0
Value £660, depreciation 10 per cent.	66	0	0
	£116	5	0

Apportioned as follows:

20 acres hay at 7s. 6d.	7	10	0
Grazing land			
,, seeds			
14 acres mowing seeds at 7s. 6d.	5	5	0
22 ,, roots (turnips, mangolds, &c.) at 10s.	11	0	0
20 ,, potatoes at 30s.	30	0	0
100 ,, corn at 12s. 6d.	62	10	0
	£116	5	0

NOTE.—Upkeep of wagons and carts should be added to this.

HORSE LABOUR.—No. 18.

COST OF HORSES, 1918—1919.

8 Horses kept.

Winter or stable period, 35 weeks, Aug. 15th, 1918, to May 14th, 1919.

Per week.	s.	d.	£	s.	d.
Maize, 1¼st. at 4s.	6	0			
Bran, 1 st. at 2s.	2	0			
Crushed oats, 6 st. at 52s. 6d. per qr.	13	1½			
			1	1	1½
Chop, 70 lb. at 38s. per ton				1	2¼
Clover, 4 st. at £7 15s. per ton				3	10½
Swedes, 56 lb. at 25s. per ton					7½
Depreciation (low)				2	6
1 st. per week linseed and condiments for 4 horses, 3¼ lb. each					7¼
Veterinary attendance and medicine ...					6
Harness (£22 for the farm, 1918-19) headstalls, lines, repairs and renewals, 30s. per annum					7
Shoeing, removing and studding (from bills)				1	3
Stable rent, rates (£1 per horse); repairs to racks, cribs, floors and partitions (£1 per horse)					10
Stable equipment. Buckets, brush, comb, brooms, bin, lamp, paraffin, &c.					3½
Interest on capital (5 per cent. on £70) ...				1	6
Supervision, 10s. per horse					2½
Bedding—for manure					
			£1	15	1¼

COST OF CHOP.

	£	s.	d.	£	s.	d.
Oat straw				1	0	0
The following stuff can chop 2 tons in half-a-day:—						
1 man at oil engine at 9s. ...		9	0			
2 men cutting and carrying straw at 7s. 3d.		14	6			
1 man feeding the operator ... 1 man operator feeding the cut-bin		14	6			
1 lad raking chaff from cut-bin ...		4	0			
	2	2	0	× 4 =	10	6
Engine.						
Paraffin, 1 galls. at 1s. 2d. ...		4	8			
Oil, ¼ pt. at 4s. per gall.			3			
Wear and tear depreciations, belting, &c., cut-bin value £90		2	6			
					7	5
Cost per ton				£1	17	11

Saddling bill, Jan.-June (5 months) for 8 working horses for repairs only (no renewals) was £8 6s. = 11d. per horse per week.

Stable equipment (4 horses).

Buckets (1 in 2 years) ... ... per annum		3	0
Brush and comb (2) ... ... ,,		10	0
Broom ... ... ,,		4	0
Bin (30s. in 10 years) ... ... ,,		3	0
Lamp, 2s. 6d., and oil at 2s. gall., 4 galls. ... ... ,,		10	6
	£1	10	6

Average 3 horses to each stable = 10s. 2d. per annum per horse.

Farm No. 64—*continued.*

Horsemen and horses spend the following time on my farm on broken time and unremunerative work in winter:—

1 day mending roads, cleaning stackyard (2 days for half of them).
1 day hauling bricks, odd implements from station, sand, fetching equipments. (This only means 8 to 16 errands for 1 horse.)
1½ days hauling coal, fuel for men (6 to 10 tons, 1 ton per horse per day, usually in small quantities at less tonnage per horse).
5 days. Shod 6 times in stable period, 6 × ½ = 2 days.
Removed 6 times ,, 6 × ½ = 2 days.
Also frost nailed or turned up.

8¼ days (actual figures)

1 horse 3 weeks fever in feet ...	2½	days for this.
1 horse 10 days lame	1¼	,,
1 horse 2 days colic	¼	,,
2 horses 3 days colic	¾	,,
1 horse 2 days colic	¼	,,
2 young horses 14 days on half time (overworked)	3½	
	8¼	days.

8 days. Threshing days 16½ (for 99 acres), of these days 3½ required half the horses for carting.
So on 3½ days time lost for 8 is 1¾.
,, 13 days half of them idle = 6½.
20 days. Wet or snow and broken time (in this period we shall get at any rate 15 in. to 20 in. rainfall) 2¼ in. per month average. Rain fell on 95 days last December to April (5 months). October to November previous considerably above that average. This 20 days covers 7½ months, or probably 140 days in which rain fell. These figures are taken from the returns of the Meteorological Office of Board of Agriculture.

45 days lost in 35 weeks	45
Sundays	35
Saturdays	12
Christmas Day...	1
Easter	1
	94

Cost for 35 weeks at £1 15*s.* 1½*d.* = 151 working days @ 8*s.* per day (approx.)

GRASS PERIOD, May 14th to August 15th.

17 weeks. Per week.	*s.*	*d.*
Grazing (see below)	5	0
Crushed oats, 3½ st. at 53*s.* 6*d.* per qr.	7	9
5 lbs. chop = 2½ st. at 38*s.* per ton		7
Tares (see below)	6	8
As winter costs (see previous costing)	8	3½
	28	3½

Lost time.

Shod 3 times	1 day
Hauling sticks for men, 4 loads, ¼ day per load for 2 horses	½ ,,
Coal 3 tons	¼ ,,
Mending 1½ miles road	3 ,,
Sick and lame, 1 horse, 3 weeks	2¼ ,,
Odd horse days, half the stable on half-time for a week at least	2½ ,,
Wet and broken time (4 to 5in. rain)	4 ,,
	14
Sundays ...	17
Saturdays ...	6

Cost for 17 weeks at 28*s.* 3½*d.* per week = 82 working days at 5*s.* 9*d.* per day (approx.)

The local criticism of these horse costings was that much more time is lost through wet weather; that in the last fortnight we have lost as much time on that account as is shown above for the whole period.

GRASS.

	£	*s.*	*d.*
Rent	2	10	0
Rates		10	0
Slagging (once in 4 years at 30*s.*)		7	6
Harrowing		3	0
Thistling			6
Fencing, ditching and pond ...		4	0
	£3	15	0 = 5*s.* per week.

The grass will be of no value when the horse is taken off. If sheep are put on it they must have their food taken to them, and the residue from their food to be charged to the grass will more than equal the value of the grazing.

COST OF TARES.

	£	*s.*	*d.*
Rent and Rates		18	0
Ploughing (tractor)	1	5	0
2 harrowing (heavy)		6	8
Drilling		5	6
Seed	7	5	0
Harrowing		3	0
Harrow		3	0
Roll		2	2
Cutting (1 man, ½ acre or less)		16	0
Leading to yard, 7½ tons per acre, 1 man, 1 horse and cart, 3 days	2	0	0
Wear and tear of machinery		12	6
Hedging		2	0
Interest		7	0
Management and incidentals	1	5	0
	£15	10	10

2 acres feed 6 horses for 3 months, 6*s.* 8*d.* per horse per week.

BASIS FOR DEPRECIATION CHARGE, 1916–1919.
WORKING HORSES 8.

Horses sold worn out.	Cost of Replacement.	Bred.	Lost.
5, value £87.	5, £352.	2	0

			£	*s.*	*d.*
Receipts.	2 at £30 = £60	*less* 5 service fees ...	10	10	0
	(foals above)	2 mares insurance ...	24	0	0
		2 mares summer keep	7	0	0
			£41	10	0

Net receipts, £18 10*s.* × £87 = £105 10*s.*

Net cost of replacements, = £352 *less* £105 10*s.* = £246 10*s.* = £10 5*s.* per horse per annum.

The local criticism of this depreciation charge was that it is considerably below the average, that on this farm no horses have been lost during this period, and that this is an exceptionally favourable condition of affairs for a farm in this district.

COST OF OPERATIONS.

Horseman.—Wage, 46*s.* 6*d.*

Lost time in summer is the 94 days, the same as the horse excepting sickness which will not amount to so much. His holidays, however, will be more on the average, so it will work out in the same proportion = 1,627*s.* 6*d.* ÷ 151 = 10*s.* 9*d.* per working day in winter, and 9*s.* 6*d.* in the summer.

Second horseman, 8*s.* 6*d.* Labourer by day, 7*s.* 3*d.*- Higher on account of work having to be provided on wet days.

A day boy can be used to do some simple classes of horse work, such as rolling, but he will do less than the average amount of work so the cost will rarely differ much.
Reaping and Binding, Opening out and Stooking.

Taken together for economy, one set of men can then help the others.

	£	*s.*	*d.*
6 horses at 8*s.*	2	8	0
Men, 10*s.* 9*d.*, 8*s.* 6*d.*, 7*s.* 3*d.*, 7*s.* 3*d.*	2	1	0
Twine, 8 acres at 4*s.*	1	12	0
8 acres for ...	£6	1	0 = 15*s.* 2*d.* per acre.

Leading.

	£	*s.*	*d.*
6 horses at 8*s.*	2	8	0
Men, 10*s.* 9*d.*, 8*s.* 6*d.*, 7*s.* 3*d.*, 7*s.* 3*d.*, 7*s.* 3*d.*, 7*s.* 3*d.*, 6*s.*	2	14	3
7 acres for ...	£5	2	3 = 14*s.* 6*d.* per acre.

Farm No. 64 — *continued.*

	Winter. per acre £ s. d.	Summer. per acre.
Ploughing 5 in.		
1 man 10*s.* 9*d.*, 2 horses 16*s.*, ⅓rds acre	2 0 0	9*s.* 6*d.*, 11*s.* 6*d.*, ⅓rds acre £1 11*s.* 6*d.*
Ploughing 6 in., for Potatoes.		
1 man 13*s.* 9*d.*, 3 horses 24*s.*, ⅓rds acre...	2 12 0	£2 10*s.* 0*d.* with second man.
Ploughing 4 in., 2-furrow.		
1 man 10*s.* 9*d.*, 3 horses 24*s.*, 1½ acres...	1 10 0	£1 7*s.* 6*d.* with second man.
Dragging, 4-horse (Deep).		
1 man 10*s.* 9*d.*, 1 boy 4*s.*, 4 horses 32*s.*, 7½ acres ...	6 4	
Dragging, 3-horse.		
1 man (second) 8*s.* 6*d.*, 3 horses 24*s.*, 7½ acres ...	4 4	8*s.*, 7*s.* 3*d.*, 7½ acres 3*s.* 4*d.*
Harrowing, 3-horse.		
1 man (second) 8*s.* 6*d.*, 3 horses 24*s.*, 10 acres ...	3 3	8*s.*, 7*s.* 3*d.*, 10 acres 2*s.* 6*d.*
Harrowing, 2-horse.		
1 man 7*s.* 3*d.*, 2 horses 16*s.*, 10 acres	2 4	7*s.* 3*d.*, 11*s.* 6*d.*, 10 acres 1*s.* 10*d.*
Drilling Corn (with new 2-horse drill).		
1 man 10*s.* 9*d.*, 2 horses 16*s.*, 7 acres	3 9	
Rowing (Good hands required)		
9*s.*, 16*s.*, 2 acres	12 6	
Splitting.		
9*s.*, 16*s.*, 2½ acres	11 8	
Scuffling (1 horse).		
7*s.* 3*d.*, 8*s.*, 2½ acres ...	6 0	
Scuffling (2 horse).		
7*s.* 3*d.*, 10*s.*, 2½ acres ...	9 4	
Rolling (2 horse).		7*s.* 3*d.*, 11*s.* 6*d.*, 10 acres 1*s.* 10*d.*
7*s.* 3*d.*, 10*s.*, 10 acres ...	2 4	
Chain Harrow.		7*s.* 3*d.*, 11*s.* 6*d.*, 12 acres 1*s.* 7*d.*

Cutting Hay.
4 horses 23*s.*, 1 man 10*s.*, 1 man 9*s.*, ½ man 3*s.* 7*d.*, average 9 acres (5 odd fields) 5*s.*

Leading Hay.
6 horses, 3 men at 9*s.*, 3 at 10*s.*, 1 girl at 5*s.*, 2¼ days for 20 acres, 10*s.* 8*d.*

Leading Clover.
6 horses, 3 men at 9*s.*, 3 at 10*s.*, 1 girl at 5*s.*, 2¼ days for 7 acres, 13*s.* 9*d.*

COSTS PER ACRE.—FIVE-COURSE ROTATION.
1919 CROPS.
FIRST COURSE.
Roots No. 12.

Turnips and Swedes, 20 acres.	£ s. d.	£ s. d.
Rent		15 0
Rates		3 0
Ploughing, 5 inches		2 0 0
Cross-plough, 5 inches		2 0 0
Dragged twice, 3 horses, 7¼ acres		8 8
Roll, 1 horse, 10 acres (Summer)		1 10
Drag ,, ... ,,		3 4
Harrow, 2 horses... ,,		1 10
Chain harrow, 2 horses, 12 acres (Summer)		1 7
Twitch collecting and burning, 1 girl, 1 acre		4 0
3 furrow plough, 3 horses, 1 man		1 2 6
Roll, 2 horses, 1 lad		1 10
Drill, 2 horses, 1 man, 7 acres ...		3 9
Seed, 2 lb. at 3*s.*		6 0
Twice scuffling, 1 horse, 2½ acres		12 0
Strike out		10 0
Hoeing		15 0
		9 10 4
Artificial manures, 5 cwt. mixture	2 8 6	
Artificial manures, carting, 6*s.* per ton	1 6	
Artificial manures, application...	1 8	
(Carry forward if fed on)	2 11 8	
Topping, tailing, and filling ...	1 8 0	
Leading to yard, 1 lad, 8*s.*, 2 horses, 16*s.*, 4 ton per day, 6*s.* per ton at 10 ton per acre ...	3 0 0	
(Omitted if fed on) ...	6 19 8	6 19 8
Wear and tear	... ...	10 0
Hedging	... ...	2 0
Interest, 5 per cent.	... ...	9 0
Management	... ...	1 0 0
General expenses	... ...	5 0
		£18 16 0

Average crop 10 tons = £1 17*s.* 8*d.* per ton for cattle feeding.
For sheep feeding, £11 16*s.* 4*d.* per acre, *i.e.*, £18 16*s.* 0*d.*
Less £6 19*s.* 8*d.*
Add also in some cases £1 per acre slag residue from wheat.

SECOND COURSE.
Barley No. 19.
(After roots fed on.)

Barley, 22 acres.	£ s. d.	£ s. d.
Rent		15 0
Rates		3 0
Three-furrow plough (Winter) ...		1 10 0
Two chisel harrows, 3 horses, 10 acres, 3*s.* 4*d.*		6 6
Harrow, 2 horses, 1 lad (second), 10 acres		2 4
Drilling		3 9
Harrow		2 4
Rolling twice at 2*s.* 4*d.*		4 8
Seed, 12 st. at 75*s.* per qr. ...		1 8 0
Weeding and hoeing		5 0
Binding, including opening out and stooking		15 2
Leading		14 6
Thatching		3 9
Extra for harvest money, 70 acres corn, £35...		10 0
Threshing.		
Engine and 2 men	1 2 0	
Men's meals	6 0	
7 cwt. coal at 2*s.* 3*d.* ...	15 9	
7 men at 8*s.* 3*d.*	2 17 9	
3 women	15 9	
1 lad, leading water ...	3 0	
1 horse	8 0	
For 6 acres	9 8 3	1 11 4
Carting to station		6 0
Wear and tear of machinery ...		12 6
Hedging		2 0
Interest on capital		7 0
Proportion of manurial value of cake fed to sheep on turnips, total £2 per acre; charge one half		1 0 0
Proportion of artificials brought forward from turnips, total £2 10*s.*; charge £1 10*s.* ...		1 10 0
Management, bailiff and self ...		1 0 0
General expenses		5 0
		£13 17 10

Yield:
1916 ... ... 36 bush.
1917 ... ... 21 ,,
1918 ... ... 36 ,,
Straw, about 15 cwts.

After roots carted off. Dressing of 3 cwt. supers and 1 cwt. sulphate of ammonia, applied.	£ s. d.	£ s. d.
Charge ¼ to barley super 3 cwt., 20*s.* 3*d.*	1 17 3	
Charge all to barley sulph. amm., 1 cwt., 17*s.* ...		
Application	3 0	
	£2 0 3	

Carry forward 5*s.* to next crop. Crop not quite so sure.

NOTE.—These charges are based on the turnip and swede crops bearing all the charges on them except manure. This makes cost of barley correspondingly low and cost of sheep and cattle correspondingly high.

THIRD COURSE.
Clover Hay No. 14.

Clover Hay.	£ s. d.
Manure brought forward; cake £1, artificials £1	2 0 0
Rent	15 0
Rates	3 0
Seed 1918, 28*s.* [1919, 40*s.*]	1 8 0
Sowing, 1 man, 15 acres...	8
Rolling before sowing	2 4
Harrowing after	2 4
Rolling after harvest	
Cutting	4 6
Turning twice (by hand), twice the horse, amount at 3*s.*	6 0
Raking	1 6
Cocking	6 0
Turning Cocks	6
Leading	13 9
Raking	1 6
Cocking and leading rakings, 2 horses, 3 men, 20 acres	2 0
Thatching	4 0
Fencing	2 0
Wear and tear of implements, wagons, ropes, sheets, etc.	7 6
Interest on Capital	7 0
Management (bailiff and self)	1 0 0
General expenses	2 6
	£8 10 10

Yield: 25 cwts. per acre and eddish.

Farm No. 64—*continued.*

THIRD COURSE, Alternative.

Clover, Grazing.	£	s.	d.
Manure, brought forward, cake, £1, artificials £1	2	0	0
Rent		15	0
Rates		3	0
Seed, 1918, 25*s.* (1919, 37*s.*)	1	5	0
Sowing			8
Rolling before sowing		2	4
Harrowing after sowing...		2	4
Hedging		2	0
Interest on Capital		4	0
Management (Bailiff and Self)	1	0	0
General Expenses		2	6
	£5	16	10

FIFTH COURSE.

WHEAT No. 38.

Wheat on Seeds	£	s.	d.
Rent 15*s.*, Rates 3*s.*		18	0
Slag, 8 cwt. at 5*s.*, 40*s.* charge ½	1	0	0
Application, 1 man, 1 horse, 7 acres (man paid extra)		3	0
Carting to Field 6*s.* per ton		3	0
Ploughing, 1 man, 2 horses, ⅓rds acre ...	2	0	0
Rolling		2	4
Chisel Harrowing		3	3
Harrowing		2	4
Drilling		3	9
Seed, 14st. at 80*s.* per qr.	1	11	6
Dressing seed			6
Harrowing seed		2	4
Cross Harrowing		2	4
Spring rolling		2	4
½ cwt. sulphate at 17*s.* on farm, application 9*d.*		9	3
Hoeing and Weeding, 5*s.* to 15*s.*		10	0
Binding, opening out and stooking		15	2
Leading		14	6
Thatching		3	9
Threshing	1	11	4
Delivering 6*s.* per ton (4 qrs.), Tractor ...		5	9
Extra Harvest Money per acre		10	0
Wear and Tear of Implements and Machinery		12	6
Hedging		2	0
Interest on Capital		6	0
Management, Bailiff and Self	1	0	0
General Expenses		5	0
	£13	19	11

Yield: 1918, 4 qrs. 1917, 3·25 qrs. 1916, 3·25 qrs.

Average yield: 3½ qrs. grain, 1 ton straw.

Wheat after Potatoes.	£	s.	d.
Rent and Rates		18	0
Manure carried forward	4	9	2
Artificial carried forward	1	9	4
Seed 14st. at 80*s.*...	1	11	1
Dressing Seed			6
Drilling with coulters removed		3	9
Ploughing in 4 ins.	1	10	0
Spring Rolling and further as above	7	7	7
	£17	9	5

FOURTH COURSE.

POTATOES No. 17.

	£	s.	d.	£	s.	d.
Rent 15*s.*, Rates 3*s.*					18	0
Manure, 15 tons at 12*s.* ...		9	0	0		
*Carting 21 loads into hill at 2*s.* 8½*d.*		2	16	10		
*Carting 15 loads out at 2*s.* 0½*d.*		1	10	7		
Charge ⅓ ...	£13	7	5		8	18	4
Or:—(1 variety received 4 tons p. a.) 2½ tons shoddy at £6 5*s.* two-thirds	4	3	4			
Leading from sta. and spd. direct ...	1	1	3			
Extra 2 cwt. artificials, 19*s.* charge two-thirds ...		15	0			
	£6	9	7			
Carried forward					£9	16	4

	£	s.	d.
Brought forward				9	16	4
Blast furnace dust, 5 cwt. 3*s.*, ⅓ of					10	0
Application					3	0
Artificials, 8 cwt. at 11*s.*, 88*s.*, ⅓ of				2	18	8
Carting 6*s.* per ton					2	5
Seeds. ½ Scotch at £10 into farm ⅓ once grown at £7	3 tons for 3½ acres			6	17	0

Cultivations.	£	s.	d.			
Ploughing 5 in.	2	0	0			
,, 6 in.	2	10	0			
Ridging		12	6			
Planting seed by hand (in stints) 8 women do 6 acres at 5*s.* ...		6	8			
Man and horse carting		2	6			
Splitting (i.e., covering) ...		11	8			
Harrowing		2	4			
Running up (as ridging) ...		12	6			
Harrowing down		2	4			
1st scuffling 1 horse		6	0			
2nd ,, 2 ,, ...		9	4			
3rd ,, 2 ,, ...		9	4			
Hoeing and weeding		12	6			
Earthing up (2 h., man and leader) 2 ac.		14	6			
				9	12	2
Or:—Plough for mustard in autumn	2	0	0			
Mustard seed, 20 lbs. at 45*s.* bush.		18	0			
Rolling		1	10			
Harrowing		1	10			
Sowing			8			
Harrowing		1	10			
Rolling		1	10			
	£3	6	0			
Deduct for sheep ...	1	2	6			
	£2	3	6			

NOTE.—24 acres carried 180 sheep for 9 weeks at 4d. per head per week, £27 22*s.* 6*d.* per acre.

Harvesting.	£	s.	d.			
Spinning, 3 horses, 1 man, 2 acres for gang		17	0			
Picking, 16 at 6*s.*, do. 2 acres ...	2	8	0			
1 man teeming buckets and ganging, 2 acres		3	8			
3 men and 4 horses to pie 2 acres	1	8	6			
2 men at pie (27*s.* and 32*s.*) ...		7	3			
Straw, 8 cwt. per acre, at 8*s.* leading and loading at 10*s.* per ton, 4*s.*		12	0			
Earthing up thin 9 yds. pie 4*s.* per ch.		1	6			
Earthing up thick 9 yds. pie 8*s.* per ch.		3	0			
Twice Harrowing (8 acres, because of tops) at 3*s.*		6	0			
Picking Harrowings, 1 acre per woman		6	0			
Gathering and burning tops, 1¼ acre per woman		4	0			
Draggings 4*s.* 4*d.*, pickings, diggings 4*s.*		8	4			
				7	5	3
Marketing.						
Bareing, sorting and weighing at 6*s.* p.t.	1	16	0			
Loading and carting to Station, 6 tons and 9*s.* (Traction at 8*s.*, 1 man to assist)	2	14	0			
Straw in trucks		2	6			
				4	12	6
Wear and tear on implements and baskets				1	10	0
Hedging and ditching					4	0
General expenses (marketing, &c.)					5	0
Management (self and bailiff)				1	0	0
Interest on capital, 5 per cent. on outlay					1	0
				£45	16	4

Average crop, seed and ware 6 to 7 tons per acre. Estimated this year 5 to 5½ tons seed and ware.

*Carting manure (actual figures) into hill:
6 horses, 7 men got 36 loads into the hill in one day (this was the best day we did), from hill to field rather more can be led.

FARM No. 65.

County, SUSSEX (West).

Size of Farm: 273 acres arable, 90 acres pasture.
Soil: Brick earth.
System of Farming: Cropping.

HORSE LABOUR No. 19.

Number of Horses: 9.

AVERAGE COST OF KEEPING HORSES, 1918-19.

		£ s. d.
Foods:		
3 bushels Oats per wk. 1st Aug.-5th Dec.	54 bush.	
2½ bushels Oats per wk. 5th Dec.-28th Feb.	30 ,,	
3 bushels Oats per wk. 28th Feb.-2nd May	27 ,,	
2 bushels Oats per wk. 2nd May-1st Aug.	26 ,,	
	137 @ 6s. 2d.	42 4 10
(allowing ½d. per bushel for carting to station).		
1½ cwt. hay, 1st Sept.-3rd May, 32½ cwts. @ 8s. 7d.		13 19 0
(cutting and carting at 3d. per cwt.)		8 1
1 acre grass 3rd May-1st Sept., charge ¾ rent for summer		1 13 4
Rates		2 4
		£58 7 7
(chaff and straw for litter put against dung)		
Shoeing by contract at 1s. per horse per week		2 12 0
(In 1910-14, charge was 16s. per horse per annum.)		
Harness, repairs and proportion new, per a/c's		2 9 3
Stable Equipment (not included under harness)		6 6
Veterinary Expenses		9 0
Depreciation, 10 per cent. on valuation £105 10s.		10 10 0
Stable Rent, rates and repairs		2 10 6
Interest on capital, 5 per cent. on £115		5 15 0
General Expenses including aircraft insurance at 5 per cent. and supervision		15 0
		£83 14 10

Average number of working days about 250.
Cost per working day, 6s. 8d.

COST OF MAN LABOUR

The following is an exact account of the cost of 5 workers on this farm from 1st August, 1918, to 1st August, 1919.

	Actual Cash Wages Paid (inc. overtime).			Insurance.			Cottage.			Total.		
	£	s.	d.	s.	d.	£	s.	d.	£	s.	d.
Carter ...	106	9	3½	13	0	7	16	0	114	18	3½
,, ...	107	1	0½	13	0	7	16	0	115	10	0½
Boy or soldier ...	69	12	3½	...		...			69	12	3½
Labourer	93	10	1	13	0	...			94	3	1
Boy ...	35	15	3½	...		...			35	15	3½
Total labour on 9 horses ...									£429	19	0
Average per horse per ann.									£47	15	6

For the year 1st August, 1919, to 1st September, 1920, the cost of the same labour will probably be increased thus:

	£ s. d.
Increase for 42 weeks at 12s. per week for 2 men	25 2 0
Increase for 42 weeks at 6s. 6d. per week for 1 man	13 13 0
Increase for 35 weeks at 3s. 6d. per week for 4 men	24 10 0
	£63 5 0

So that average cost per horse will be £55 18s. 3d. per annum, an increase of 15 per cent.

WHEAT No 39.

AVERAGE COST OF PRODUCTION OF 1919 CROP.

	£ s. d.	£ s. d.
Rent. Allowing for waste, hedges, roads, &c		2 2 0
Rates.		4 6
Manure. Dung.		
10 tons from heap in field at 11s. per ton	5 10 0	
Carting, 3 horses 19s. 6d., 1 man 8s. 4d., 1 boy 3s. 2d., 3 men 16s., 4 acres per day.	11 3	
Spreading, 3s. 3d. per acre ...	3 3	
	6 4 6	
Carried forward		2 6 6

	£ s. d.	£ s. d.
Brought forward		2 6 6
Charge two-thirds		4 3 0
Artificials—Mixture of phosphates and sulph. amm. at average cost		1 8 2
Seed.		
3 bushels at 84s. per qr. Bluestone 6d. Dressing and sowing 1s. 9d.		1 13 9
Cultivations.		
Ploughing, 2 horses 13s., man 6s. 4d., 4s. 5d. ac. ...	1 4 2	
Pressing, 1 horse 6s. 6d., boy 3s. 2d., 1 ac.	6 0	
Harrowings (6), 3 horses 19s. 6d., man 6s. 4d., 18s. acre	8 6	
Harrowings (2) spring ...	2 10	
Rolling, 2 horses 13s., man 6s. 4d., 10 acres	2 0	
Docking and thistling, 1 man 2 days 5s. 4d.	10 8	
		2 14 2
Harvesting.		
Cutting and binding, 4 horses 26s., 2 men 25s. 4d., for 7 acres	7 4	
String, 5 lbs.	5 1	
Cutting round and shocking	4 0	
Carting and stacking, 4 horses 26s., 3 men 31s. 6d., 1 boy 5s. 3d., 1 boy 2s., 6 men 54s., 9 acres per day ...	13 2	
Thatching 12 sq. at 1s. 9d., 21s., straw 20s., 500 spars at 12s. 6d. per 1,000, 6s. 3d. for 8 acs.	3 11	
		1 15 6
Threshing. 8 acres per day.		
3 men with machine at 1s. 1d. per sack (1 ac.)	10 10	
Coals 8s., 5 men on machine 26s. 8d.	4 4	
3 men at straw 16s., 1 boy 3s. 2d., 1 horse 6s. 6d. ...	3 2	
Carting corn away, 2 men 12s. 8d., 2 horses 13s. ...	3 3	
Thatching straw (old straw and spars) 12 sq. at 1s. 3d., water 1s.	2 0	
		1 3 7
Carting to Station. 4 horses 26s., 3 men 16s. for 8 acres		5 3
Hedging and Ditching. 1 man 4 days, 21s. 4d. for 8 acres		2 8
Use of Implements and Machinery		12 6
Broken Time		5 0
General Expenses. Insurance, unremunerative work, &c.		9 6
Interest on Capital, 5 per cent.		15 6
Management		15 0
Total		£18 10 1

Average yield—40 bush. grain, 25 cwts. straw.

FARM No. 66.

County, CHESHIRE.

Size of Farm: 40 acres arable, 91 acres pasture.
Soil: Strong loam on clay.
NOTE.—Small working farmer.
System of Farming: Cropping and dairying.
Three Previous Crops: Oats, roots and wheat.

CLOVER HAY No. 15.

COST OF PRODUCTION OF 10 ACRES CLOVER HAY.

1918 CROP.	£ s. d.	£ s. d.
Rent		12 0 5
Rates		2 8 4
Cost of seeds £40 7s. — 1918 £15 0 0; 1919 £10 0 0; 1920 £7 13 6; 1921 £7 13 6		15 0 0
Sowing seeds, 2 men, 1 day ...		12 0
Unexhausted manure from root crop	10 10 0	
5 cwts. slag per acre at 3s 6d. per cwt. £8 15 0		
Sowing same 4s. per acre ... 2 0 0		
	£10 15 0	
Charge four-fifths	8 12 6	
		19 2 0
Carried forward		49 2 9

Farm No. 66—*continued.*

	£	s.	d.
Brought forward	49	2	9
Harrowing once, 2 horses, 1 day		16	9
Rolling 3 times, 1 horse, 4 days	2	5	6
Cutting, turning, carting, stacking and thatching	15	0	0
Carting to station, 1¼ miles, 2*s.* 6*d.* per ton per mile ...	2	6	10
Use of implements and machinery	5	0	0
General Expenses — hedging, ditching, &c.	10	0	0
Interest on capital, 5 per cent. per annum	2	6	0
Management	10	0	0
Total ...	£96	17	10
Cost per acre	9	13	9
Deduct value of aftermath		15	0
Net cost per acre ...	£8	18	9

Yield per acre, 30 cwts. (Sold 301 cwts.)

FARM No. 67.

County, SUSSEX, W.

WHEAT No. 40.

Soil. Heavy loam.

COST OF GROWING ONE ACRE OF WHEAT—1919 CROP.

Average of 57¼ acres. Wheat grown in each case after seeds.

	£	s.	d.
Carting dung		16	9
Cost of dung at 2*s.* per load	1	13	4
Dung spreading		3	5
Steam ploughing	1	10	1
Horse ploughing		4	9
Sowing		1	11
Cost of wheat	1	12	8
Harrowing		9	0
Water furrowing			6
Rolling			2
Weeding		17	0
Binding		4	0
Carting		15	6
Shocking		2	4
Rent and rates	2	0	7
Thatching and straw for ditto and spars ...		4	0
Hedging and cleaning out ditches (£150 per annum)		5	0
Binder twine—1 ball per acre		6	0
Threshing at 1*s.* 6*d.* per sack, present charge...		15	0
Labour for threshing		3	0
Weighing and getting to barn		2	6
Coal for engine, 7¼ cwts. at 3*s.* 6*d.* per cwt. ...		2	9
Carting to station, 1*s.* 3*d.* per sack, six miles ...		15	8
Depreciation 10 per cent., repairs £30 (low), interest 5 per cent. on implements (£1,800)...		10	0
General expenses (£530 per annum)		8	10
Management		10	0
Insurances		2	0
Repairs to buildings, etc. (£100 per annum) ...		3	4
Proportion of cleaning crop carried forward ...	1	0	0
Interest on outlay, say 5 per cent. for 9 months on £16		12	0
Total cost	£16	12	1

Average yield, 40 bushels per acre. Credit straw at £1 per acre.

[Note.—This statement is based on daily records. Horses charged at 8*s.* per working day. Value put upon dung is an estimate and is very low for present day. On the usual basis, the charge would be 12 tons dung at 10*s.* per ton, £6, of which at least £4 would be charged to wheat. The charge for a proportion of cleaning costs is also low and in view of the statement given below on fallowing cannot be less than £2 per acre, assuming on the average a bare fallow every fifth year. These amendments would result in a total cost of £19 18*s.* 9*d.* per acre.—J.W.]

MANGOLDS No. 11.

Soil. Heavy loam.

COST OF GROWING ONE ACRE OF MANGOLD—1919 CROP.

Average of 17½ acres.

	£	s.	d.
Ploughing (3 times, once tractor) } Cultivating (3 times, twice tractor) } Harrowing ... ... } Rolling ... ... } Weeding ... ... } Couching ... ... } Carting dung ... ... } from daily records.		19	2
		15	5
		3	8
		18	6
		15	1
14 loads of mixed dung at 7*s.* 6*d.* per load, half charged	2	13	0
6 loads of yard dung at 5*s.* per load, half charged		14	10
Dung spreading } Digging corners } from daily records.		4	0
			5
2 cwt. Basic slag, half charged		4	8
1 cwt. Superphosphate, half charged		3	3
1 cwt. Sulphate of Ammonia		16	4
Drilling ... ... } 8¾ lbs. seed ... ... } from daily records.		3	5
	1	1	10
Hand hoeing ... ... } Horse hoeing... ... } from daily records.	1	10	2
		10	0
Pulling ... ... } based upon last year's		14	0
Carting and clamping } daily records.	3	0	0
Rent and rates	1	1	6
Hedging and clearing out ditches } Depreciation repairs and interest on implements ... ... } General expenses ... ... } Management ... ... } Insurances ... ... } Repairs to buildings, gates, etc. ... } as in Wheat Costs.		5	0
		10	0
		8	10
		10	0
		2	0
		3	4
Interest on outlay, 5 per cent. for 6 months on £24 5*s.*		12	1
	£23	17	1
Less proportion of cleaning costs	5	1	2
Cost per acre...	£18	15	11

Average yield: 30 tons (much less in 1919).

[Note.—Tractor ploughing has been taken at 12*s.* per acre (excluding labour), tractor cultivating at 5*s.* per acre (excluding labour). The tractor account so far indicates that these charges are too low and that they will have to be increased to 15*s.* and 7*s.* 6*d.* per acre respectively. The amount carried forward as cleaning costs is based upon what the cost of cultivations was found to be on a field where cleaning was not necessary.—J.W.]

Bare Fallow.

Soil. Heavy loam.

COST OF 12 ACRES OF FULL SUMMER FALLOW.

	£	s.	d.
Ploughing ... ... } Letting off water ... ... } Cultivating ... ... } Docking ... ... } Rolling ... ... } Harrowing ... ... } Rent at 20*s.* per acre ... } from actual records.	45	10	3
		5	4
	12	16	4
	2	17	6
	11	7	5
	7	4	1
	12	0	0
General expenses estimated at 8*s.* 10*d.* per acre	5	6	0
Hedging and ditching estimated at 5*s.* per acre	3	0	0
Depreciation, repairs of implements estimated at 10*s.* per acre	6	0	0
Management estimated at 10*s.*	6	0	0
Insurances estimated at 2*s.*	1	4	0
Repairs to buildings estimated at 3*s.* 4*d.* ...	2	0	0
	£115	10	11
Cost per acre	£9	12	7

FARM No. 68.

County, LANCASHIRE.

WHEAT No. 41.

Size of Farm. 200 acres arable.
System of Farming: Cropping and sale of crops.

COST OF PRODUCTION OF 40 ACRES OF WHEAT—1918 CROP.

(Horse labour at 8*s.* 9*d.* per day.)

	Cost per acre. £	s.	d.
Rent £2 1*s.*	84	0	0
Rates one-fifth of total	9	5	8
Ploughing, based on Government price, £1 10*s.* per acre	60	0	0
Harrowing, twice, 10 acres basis, 8*s.* 1 man, 8*s.* 9*d.* each horse, team horses...	10	4	0
Carried forward	163	9	8

Farm No. 68—*continued.*

	£	s.	d.
Brought forward	163	9	8
Sowing, 10 acres basis, 3 horses, 2 men	8	9	0
Seed, 3¼ bushels to acre. Sensation, 29 bags, 37*s.* 6*d.*; Japhet (Gartons), 4 bags at £7 14*s.* 6*d.* per quarter; White Marvel, 2 bags at £2...	73	16	6
Rolling, 7 acres basis, 1 horse, 1 man	4	15	9
Cutting, 6 acres basis, 3 horses, 1 man, 4*s.* 1 boy	12	15	0
Binder twine, 20 balls to the cwt., 32 balls at £5 10*s.* per cwt.	8	6	0
Setting up at 2*s.* 6*d.* per acre	5	0	0
Moving and re-stooking, equivalent to twice stooking	10	0	0
Carting and stacking, 8 men, 6 horses, 1 woman 5*s.*, 1 boy 4*s.* (3 days)	18	16	6
Threshing (8 hours), 4 days at £6. 8 men, exclusive of machineman, 8*s.* per day	36	16	0
Loading and carting to station 200 bags (40 tons) wheat straw...	15	12	6
One man assisting load straw at station 4 days	1	12	0
Slag, 6 cwts. to acre, £2 15*s.* per ton, 12 tons, half carried forward to next crop	16	10	0
Manurial value 25 per cent. from root crop ...	8	3	9
Cleaning costs one-third from root crop ...	12	15	6
Establishment charges	60	0	0
Interest 5 per cent. on outlay for 9 months ...	19	5	1
Supervision, 20*s.* per acre, over farm one-fifth total	40	8	0
Insurance, including horse insurance, £22 10*s.* fire £10	6	14	0
Total cost of production	£523	5	3

Average cost per acre, £13 6*s.* 5*d.*

TOTAL RETURNS FROM CROP OF WHEAT, 1918.

40 ACRES.

	£	s.	d.
207 bags which, owing to damaged condition, were sold at 35*s.* per bag	362	5	0
5 bags offals at £1	5	0	0
40 tons straw sold at £2 12*s.* 6*d.* per ton ...	105	0	0
	£472	5	0

Average yield over five years, 28 bushels grain.
" " " 25 cwts. straw.

FARM No. 69.

County, BERKS.

BEEF No. 11.

AVERAGE COST per Live Cwt. of 15 FAT CATTLE. 1918–19.

Date of Purchase, 6th Nov., 1918.

Average date of Sale, 30th May, 1919.

Class of cattle: Shorthorn.

	£	s.	d.	£	s.	d.
Buying Price of 15 Cattle ...				437	0	0
Buying Expenses					15	0
Food Consumed:						
3 ton 17 cwt. Bibby Meal ...	77	9	0			
2 " Malt Dust ...	28	3	0			
1 " Cotton Cake ...	16	0	0			
2 " Linseed Cake ... (purchased 17th Sept., 1918).	46	0	0			
10 qrs. Barley at 70*s.*	35	0	0			
10 " Oats " 50*s.* ...	25	0	0			
5 " Tail wheat at 68*s.* ...	17	0	0			
Grinding above at 1*s.* 6*d.* per sack	2	5	0			
6 trusses per day Rye grass and Hop-clover Hay; 1 truss per day meadow hay, chaffed, 34 tons 12 cwts. in all at £8 ...	276	16	0			
1 ton straw per week at 30*s.* ...	42	0	0			
4 loads barley chaff at 30*s.* per load	6	0	0			
4 weeks grass at 2*s.* 6*d.* per week each	7	10	0			
				579	3	0
Carried forward				1,016	18	0

	£	s.	d.
Brought forward	1,016	18	0
Labour: 26 weeks at 35*s.*; 4 weeks at 20*s.* (includes labour of tying and carting clover hay (7*s.* 6*d.* per ton) and of carting straw. (1 man's full time charged for house feeding period.)	49	10	0
Marketing Expenses	1	10	0
Rent and Rates on Buildings	5	0	0
General Expenses	5	0	0
Interest on capital 5 per cent. on £1,000 for 6 months	25	0	0
Management	10	0	0
Total cost	£1,112	18	0
Deduct 90 tons dung at 10*s.* per ton	45	0	0
Net cost	£1,067	18	0

Sales as under:

May 23rd, 1 carcase, 653 lbs., say 9-3-15 L.W.
May 23rd, 1 at 12-3-14, 1 at 11-3-21, 1 at 11-0-21, 1 at 11-2-14 L.W.
May 30th, 1 at 12-2-0, 1 at 10-3-14, 1 at 12-1-18, 1 at 12-3-0, 1 at 11-0-0, 1 at 10-1-21 L.W.
June 13th, 1 at 10-3-0, 1 at 10-3-14, 1 at 11-1-4, 1 at 11-0-7 L.W.
Total L.W. at sale, 171-1-23, say 171¼ cwts. (realising £742 14*s.* 0*d.*)
Cost per cwt. L.W., 124*s.* 6*d.*

Note.—This is an example of cattle feeding without roots. The average consumption of grains and cakes per head, per day was about 9¼ lbs. and of hay about 24 lbs. The cattle are largely kept for manure making, but this case indicates that the manure cannot be made economically in seasons where the root crop has failed. J.W.

FARM No. 70.

County, KENT.

POTATOES No. 18.

COST OF GROWING ONE ACRE OF POTATOES ON MEDIUM SOIL—1918 CROP.

	£	s.	d.
Rent and Rates	2	7	6
Ploughed twice, 3 horses (¾ acre per day) ...	4	3	10
York harrowed once, 3 horses (8 acres per day)		3	11
Rolled once, 2 horses (8 acres per day)		3	0½
Baulking and splitting in, 2 horses (2¼ acres per day)	1	4	4
Drilling, artificial manures and cartage ...		3	5½
Application of 30 tons of farmyard manure, cartage and spreading at 10*s.* 10*d.* 16 5 0			
Less one-third charged to succeeding crop 5 8 4	10	16	8
6 cwt. artificials	4	13	0
Seed Potatoes, including cartage, storage and boxing	8	16	3
Planting, carting and clearing		16	11
Harrowing baulks once, 2 horses (8 acres per day)		3	1½
Drill Rolling once, 1 horse (6 acres per day) ...		2	10½
Braked three times, 2 horses (2 acres per day)...	1	16	6
Hand hoed		14	0
Earthing, 2 horses (2 acres per day)		12	2
Ploughing out (3 horses) and harrowing (1¼ acres per day)	1	5	2
10 women and 1 man picking up (1¼ acres per day)	2	8	2
Carting to clamp, digging and loading	2	3	10
Carting haulm		8	7½
Clamping and winter coating		16	3
Straw for clamp	1	10	0
Dressing out of clamp and carting	5	3	3½
Interest on capital at 5 per cent. on £30 ...	1	10	0
Management	1	10	0
	£53	12	11

Note.—The above costing is based on 7*s.* 1*d.* per day for horse and 10*s.* 2*d.* per day for man, and to include repairs to and use of implements, harness, unremunerative work, overtime and management.

Yield 8 tons, seed and ware.

FARM No. 71.

County, KENT.

POTATOES No. 19.

COST OF GROWING ONE ACRE OF POTATOES ON GOOD LOAM SOIL ON CHALK—1918 CROP.

	£	s.	d.
Rent and Rates	2	11	0
Steam cultivated twice	1	5	0
Drag harrowed once, 4 horses (7 acres per day)		7	0
Burning rubbish		1	0
Dunging, with 25 tons of yard dung, spreading and carting 10s. 12 10 0			
Less one-third charged to succeeding crop 4 3 4			
	8	6	8
Ploughed twice, 3 horses (¾ acre per day) ...	4	8	0
Drag harrowed twice, 4 horses (7 acres per day)		14	0
York harrowed once, 2 horses (8 acres per day)		3	3
Rolled once, 2 horses (8 acres per day)		3	3
Baulked once, 2 horses (3 acres per day) ...		8	8
Planting, carting and moving seed potatoes ...		12	0
Cost of seed, 18 cwt. per acre at £11	9	18	0
7 cwt. of artificials per acre	4	15	0
Application, mixing and carting of ditto. ...		7	0
Baulked once, 2 horses (3 acres per day) ...		8	8
Rolled once, 1 horse (7 acres per day) ...		2	2
York harrowed once, 2 horses (8 acres per day)		3	3
Braked three times, 2 horses (3 acres per day)	1	6	0
Hand hoed		11	0
Dry sprayed 4 times (materials 7s. 6d., labour 1s. 6d.)	1	16	0
Ploughed out, 3 horses (3 acres per day) ...		13	4
18 women and 1 man picking up into cart ...	2	2	8
Clamping and covering in		7	2
York harrowed twice, picking up and carting haulm	2	2	10
Straw for clamp	1	10	0
Sorting, loading and carting to station ...	5	0	0
Interest on capital 5 per cent. on £30	1	10	0
Management and supervision	1	10	0
	£53	3	5

NOTE.—The above costings are based on the cost of 8s. per horse for each working day including depreciation, repairs, unremunerative work, &c., and 10s. for waggoner and 7s. for ordinary labourer.

Yield 6 tons per acre, seed and ware.

FARM No. 72.

County, HAMPSHIRE.

SHEEP No. 5.

SHEEP ACCOUNT FOR 1918-19.

Size of Farms (two worked as one):

One farm—	420 acres arable.	Other farm—	150 acres down.
	135 ,, pasture.		70 ,, arable.
	200 ,, down		20 ,, pasture.
	58 ,, waste meadow.		
	30 ,, waste land.		240
	849		

Registered Hampshire Down Flock.

Valuation, taken at fair market value of SHEEP STOCK.

			£	s.	d.
September 20th, 1918.					
102	Two Teeth Ewes	at £5 ...	510	0	0
70	Four ,, ,,	,, £4 10s. ...	315	0	0
75	Six ,, ,,	,, £4 10s. ...	337	10	0
82	Registered Draft Ewes	,, £4 ...	328	0	0
329					
125	Ewe Lambs at £3 5s. each		406	5	0
4	Two Teeth Rams at £5		20	0	0
2	Two Ram Lambs at £5		10	0	0
460			£1,926	15	0

Ewes bought since to replenish the Flock.

			£	s.	d.
July, 1919.					
105	Ewes 4-6 Registered Draft		602	12	6
3	Ram Lambs		43	1	0
2	,, ...		29	8	0
			£675	1	6

Expenses.	£	s.	d.
Wages as paid to shepherd and son ...	152	14	10½
Extra labour during lambing season, putting up lamb pen and dipping	30	0	0
Cost of dipping powder	3	0	0
Paid for foot dressing	31	5	0
Veterinary expenses and chemicals	20	15	2
Labour of 1 man and 1 horse waiting on sheep—drawing out hay, water, straw, cake, moving hurdles and troughs daily for 6 months Man at 6s. per day, horse at 7s. per day = 182 days at 13s.	118	6	0
Cost of 20 doz. hurdles per year to replace old ones at 22s. per doz.	21	0	0
Cost of carting hurdles from the wood, 7 miles from farm, 3 horses and 2 men, 1 day	1	13	0
Cost of repairing hurdles and creosoting same	5	8	7
340 gallons of creosote used at 11d. per gallon and casks	18	11	8
Upkeep of shepherds' houses (2), 2 carts, 3 water barrels, 45 cake troughs, 50 hay capes, 24 lamb troughs, 4 lamb creeps ...	12	12	0
Hay consumed from Oct. to April, 65 tons at £8	520	0	0
Straw used during lambing and to make lamb pen, 25 tons at 30s.	37	10	0
¾ cost of cake fed to sheep, cake cost £670 19s. 8d. ¾	447	6	5½
Water supplied at 1s. 6d. per 1,000 gallons...	5	5	0
Shearing ewes and tegs	10	6	0
Rent, rates and taxes on 350 acres of down, fed entirely by the ewes at 8s. per acre ...	125	0	0
41 acres of aftermath fed by sheep at £3 per acre	123	0	0
123 acres of turnips, vetches, winter barley, rye grass and rape, charging half cost of all tillages, seed, &c., at £11 per acre = £1,353 (half)	676	10	0
Interest on capital, £1,926 15s. 0d. at 5 per cent.	96	19	9
5 per cent on average cost for 6 months, average cost £2,360 3s. 8½d. = (½) £1,180 1s. 10d.	59	0	0
Management	100	0	0
Total ...	£2,616	3	5½

Credit.	£	s.	d.
Sold 6 Ram lambs	28	12	0
1 Ewe teg	2	8	9
75 Draft ewes	312	10	0
10 Fat ewes	49	15	0
27 Ewes at 70s.	94	10	0
22 Ewes died, by skins at 4s. each ...	4	4	0
141			
200 lambs bred and sold as stores, average 50s.	500	0	0
Wool sold, from 434 sheep average 6 lb. 2 oz. per head at 3s. 3d. per lb. *less* expenses ...	395	18	11
Total ...	£1,387	19	0

Valuation of sheep on the far farm.
Taken at fair market value September, 1919.

			£	s.	d.
120	Two teeth ewes at £5		600	0	0
120	Four ,, ,, £4 10s.		540	0	0
84	Six ,, ,, £4 10s.		378	0	0
100	Reg. draft ,, £6		600	0	0
424					
5	Ram lambs at £5 (these lambs cost £72 9s.)		25	0	0
	Total ...		£2,143	0	0

SUMMARY.

	£	s.	d.		£	s.	d.
Valuation Sept. 1918	1,926	15	0	Receipts ...	1,387	19	0
Sheep purchases ...	675	1	6	Valuation :			
Expenses	2,616	3	5½	Sept. 1919	2,143	0	0
				Deficit ...	1,687	0	11½
	£5,217	19	11½		£5,217	19	11½

NOTE.—Only 200 lambs were reared from 329 ewes and no ewe lambs were retained for flock purposes; hence the purchase of 105 registered draft ewes, which partly accounts for the deficit.

A further credit will be due to the sheep for manurial residues.—J. W.

FARM No. 73.

County, WILTS.

System of Farming: Corn growing and sheep.

[The appended table of costs was drawn up sometime ago and indicates the increased costs of the various factors in mutton production. Hay and straw have been taken at consuming value, the total net charge for 60 acres roots was £54 and £107 in 1913-14 and 1917-18 respectively. In the case of catch crops only the cost of seed has been charged to sheep. In fact, this system of costing sheep results in heavy charges for cultivations and manures against the corn crops.—J. W.]

SHEEP No. 6.

COMPARATIVE COST OF SHEEP PRODUCTION IN NORTH WILTS.

Flock of 350 Hampshire Down Ewes.

Debits.

	1913-14. £ s. d.	1917-18. £ s. d.
Manual labour	104 16 6	200 0 0
Horse labour	43 4 0	79 4 0
Root and vetch seeds	18 2 6	91 19 6
26 acres old field fed	26 0 0	58 10 0
18 dozen hurdles	9 0 0	20 14 0
2 dozen cages	1 16 0	3 12 0
2 troughs	1 0 0	2 0 0
Artificial manure for roots	30 0 0	65 0 0
6 Rams (own breeding)	36 0 0	90 0 0
Feeding stuffs	459 7 3	1,234 15 0
100 tons hay	225 0 0	375 0 0
40 tons straw	40 0 0	75 0 0
Drilling, horse hoeing, hand hoeing and pitting roots (60 acres)	54 0 0	107 0 0
Interest on capital value of flock—		
for 1914 £1,086 at 5 per cent.	54 6 0	
for 1918 £1,840 at 5 per cent.		92 0 6
Losses—7 per cent. on above amounts	76 0 0	128 16 0

Credits.	1913-14. £ s. d.	1917-18. £ s. d.		
Wool	85 0 0	130 0 0		
Manurial value of feeding stuffs and manure	140 0 0	210 0 0		
Mutton value of rams	21 0 0	36 0 0	246 0 0	376 0 0
			£932 12 3	£2,247 10 6

Cost of production of one lamb	£2 13 3	6 8 5
Increased cost of production per head	£3 15 2	
Mutton value for 1918 ... 56 lb. lamb @ 1*s.* 2*d.*=65*s.* 4*d.*		
Plus skin	10*s.* 0*d.*	
	75*s.* 4*d.*	
Deficit per lamb	53*s.* 1*d.*	

COMPARATIVE COST OF DIRECT LABOUR TO SHEEP.

Flock of 400 Ewes.

July, 1914.

Per week.

	s.	*d.*
Shepherd	17	6
Under do.	14	6
Boy	10	0
Two horses and man	60	0

at 52 weeks ... £265 4 0

£265 4 0 for 400 sheep = 13*s.* 3*d.* per head.

1919.

As per Wages Board Recommendation.

Per week.

	s.	*d.*
Shepherd	45	0
Under do.	40	0
Boy	25	0
Two horses and man	120	0

at 52 weeks ... £598 0 0

£598 0 0 for 400 sheep = £1 9*s.* 10½*d.* per head.

COMPARATIVE PRICES OF AGRICULTURAL SEEDS AND OTHER COMMODITIES.

Largely used in arable Sheep Farming.

	1914.	1919.
English Winter Tares	5*s.* per bus.	33*s.* per bus.
Russell's 1,000 hd. kale	40*s.* „ cwt.	2*s.* 6*d.* „ lb.
Rye	32*s.* „ qr. (480 lbs.)	84*s.* „ qr. (480 lbs.)
Swedes	25*s.* „ bus. (52 lbs.)	130*s.* „ bus. (52 lbs.)
Turnips	25*s.* „ „ (52 lbs.)	156*s.* „ „ (52 lbs.)
Mustard Seed	12*s.* „ „ (56 lbs.)	36*s.* „ „ (56 lbs.)
Rape	10*s.* „ „ (52 lbs.)	42*s.* „ „ (52 lbs.)
English Clover	56*s.* „ cwt.	275*s.* „ cwt.
Trefoil	25*s.* „ „	85*s.* „ „
French Ital. Rye Grass	40*s.* „ bale (2 cwt.)	100*s.* „ bale (2 cwt.)
Cotton Cake	£4 10*s.* per ton	£20 „ ton (Govt.)
Linseed Cake	£8 0*s.* „	£25 „ „
Hurdles, per doz.	10*s.*	25*s.*
Trough, wood	10*s.*	35*s.*
Shearing, per 100	17*s.* 6*d.*	40*s.*

COMPARATIVE RETURNS.

Sept. 1st.	1914. £ s. d.	1919. £ s. d.	Remarks.
Westbury Hill Fair, Lamb (Stores).	5 6	3 0 0	Increase 14*s.* 6*d.* per head.
Wool — 4 lbs. per head per Ewe.	8 0	15 0	Increase 7*s.* per head.
Mutton—per lb.	10¼	1 2¼	Increased 4*d.* per lb.

FARM No. 74.

County, SUSSEX.

COST OF THE PRODUCTION OF MUTTON.

MUTTON No. 6.

Cost of fattening 245 sheep from 30th Sept., 1918, to 31st March, 1919.

	£ s. d.	£ s. d.
Cost of 245 sheep		585 10 0
„ 14 acres rape and turnips at £8 14*s.* per acre		121 16 0
„ 14 acres swedes at £11 9*s.* per acre		160 6 0
„ Cake, ½ lb. per sheep per day, for 180 days at 2*d.* per lb.		183 15 0
„ Hay, ¼ lb. per day per sheep, for 180 days at 1*d.* per lb.		91 17 6
Depreciation of hurdles, &c.		15 0 0
Market headage charges		18 3 0
Rail and drover's expenses		3 2 0
Labour, shepherds		66 13 0
Management and general charges		55 0 0
5 per cent. on capital value, viz.:—£585 10*s.* for ½ year		14 12 6
5 per cent. on cultivations, manure, &c., viz:—⅓ of £282 2*s.*		7 1 0
Total		£1,322 16 0
Less 1/3 cost of cake as manurial value		61 5 0
Total		1,261 11 0
Credit value of 244 sheep and skins sold (1 died)		1,116 19 11
Debit Balance		£144 11 1

DETAILS OF PREVIOUS ITEMS.

	£ s. d.	£ s. d.
Cost of roots consumed by 245 sheep:—14 acres at £8 14*s.*		121 16 0
Rape and Turnips.		
Ploughing three times (2 horses)	3 15 0	
Cultivating three times at 5*s.* per acre	15 0	
Harrowing, eight times at 2*s.* 6*d.* per acre	1 0 0	
Rolling, four times at 2*s.* 6*d.* per acre	10 0	
Drilling at 3*s.* per acre	3 0	
Seed at 5*s.*	5 0	
Horse hoeing, twice, 4*s.* 6*d.* per acre	10 0	
Single horse hoeing, once at 8*s.* per acre	8 0	
Rent of land, per acre	1 5 0	
Rates, per acre	3 0	
Total cost per acre	£8 14 0	

Farm No. 74—*continued.*

	£ s. d.	£ s. d.
Swedes:—14 acres at £11 9s. 0d.		160 6 0
Ploughing 3 times (2 horses)	3 15 0	
Cultivating, three times at 5s. per acre	15 0	
Harrowing, eight times at 2s. 6d. per acre	1 0 0	
Rolling, four times at 2s. 6d. per acre	10 0	
Drilling at 3s. per acre ...	3 0	
Seed, 2 lbs. per acre, at 2s. 6d.	5 0	
Hoeing (hand), at 13s. per acre	13 0	
Horse hoeing, twice at 5s. per acre	10 0	
Rent of ground	1 5 0	
Rates	3 0	
Artificial manure, per acre ...	1 10 0	
Couching land and carting same at per acre	1 0 0	
Total cost per acre	£11 0 0	
Cake consumed:—(Linseed and cotton cake.) 245 sheep, ¼ lb. per day for 180 days at 2d. per lb., = 15s. per sheep for 245 sheep		183 15 0
Hay consumed:— 245 sheep, ¼ lb. per day for 180 days at 1d. per lb. = 7s. 6d. per sheep for 245 sheep		91 17 6
The above includes cost of breaking cake, tying hay and carting to the sheep fold, and allows for extra hay required during frosty weather.		
Depreciation on sheep tackle, viz:—Hurdles, wire troughs and turnip cutters at 10 per cent.		15 0 0
Market headage charges:—On 245 sheep ...		18 3 0
Rail on sheep, as stores when purchased and drover's charges		3 2 0
Labour, shepherds		66 13 0
Management, including growing of roots, &c., and general charges		55 0 0
5 per cent. on capital value, viz:—£585 10s for ½ year		14 12 6
5 per cent. on cultivations, manure, &c., ½ of £282 2s.		7 1 0

[The above sheep were sold between 3rd February and 21st April, 1919, the average date being 31st March.

The breed was Dorset Down-Southdowns. The average carcase weight when sold was 31 lbs. per sheep, and the skins realised from 9s. to 15s. each, or an average of about 12s. each.

NOTE.—The above statement has followed the custom of the district in regard to the charge for roots and the credit for manurial value.

As it stands the statement shows that the following crops must carry a charge of £205 16s. 1d., *i.e.*, if sheep are not to show a loss. The statement may be summarised thus:

	£ s. d.
Total cost	1,322 16 0
Charge to crops	205 16 0
	£1,117 0 0
Less value of skins	144 0 0
Cost of 14,986 lbs. of mutton	£973 0 0
Cost per lb.	1s. 3·58d.—J.W.]

FARM No. 75.

County, DORSET.

Size of Farm.—500 acres arable, 120 acres Sheep run.

Soil—Light.

System of Farming—Corn growing and Sheep.

SHEEP No. 7.

SHEEP ACCOUNT FOR THE YEAR ENDED MICHAELMAS, 1919.

Debits.	£ s. d.	£ s. d.
Valuation—Michaelmas, 1918.		
559 Breeding Ewes at 60s.		
235 Ewe Tegs at 48s.		
7 Rams at 100s.		
10 Ewes at 69s.		
73 mixed sale Lambs at 40s.		2456 10 0
Carried forward		£2456 10 0

Farm No. 75—*continued.*

	£ s. d.	£ s. d.
Brought forward		£2456 10 0
Purchases.		
Sheep bought, 23 couples (ewe and lamb) ...		99 9 6
Cake and corn purchased for sheep, 46 tons ...		900 5 3
60 dozen hurdles, and 2 dozen sheep cribs purchased per year		70 10 0
Sheep troughs, after estimating yearly depreciation		5 0 0
Tar, &c., for marking		1 4 0
Labour, &c. Two shepherds		221 0 0
Castrating		3 0 0
Tailing, including labour expenses		6 0 0
Dipping, with Cooper's sheep dip and labour		12 0 0
Maggot Oils, Foot rot, Lambing Oils and other drinks		9 1 0
Putting of lambing yard, thatching, labour, poles and other materials		15 0 0
Lining Shepherds' bars, 12s.; repairs to Shepherds' portable houses, £2		2 12 0
Cost of cartage of hurdles, troughs, crib, &c.		39 0 0
Cost of pumping and hauling water during Summer		45 0 0
Extra to Shepherds for lambing, sheep trimming, lamb money, &c.		20 0 0
Shepherds taking sheep to market		1 10 0
Extra help for 3 weeks during lambing ...		6 0 0
1 man and two horses (4 weeks) carting roots to ewes and lambs		30 0 0
Shearing, £22 16s.; assistants, £6 8s.; packing wool, £1 10s.; twine, £1 15s.; loading and delivery to station, £2 10s.		34 9 0
About 15 tons of straw used for lambing at 30s.		22 10 0
Cracking and haulage of cake, peas, &c., and bags		27 10 0
110 Tons of best clover and hay at £8 per ton		880 0 0
30 Acres of vetches sown, solely for sheep; 1 plough, 30s.; 2 drags, 8s.; 2 rolls, 6s.; 1 drill, 6s.; 2 harrows, 6s.; seed, 2 bushels at 35s. per bushel = £6 6s. per acre ...		189 0 0
12 Acres of Rye sown solely for sheep; 2 ploughs, £3; 2 drags, 8s.; 1 drill, 6s.; 2 harrows, 6s.; 1 couching, 10s.; seed, 45s. = £6 15s. per acre		81 0 0
12 Acres of Trifolium sown solely for sheep; 2 rafters, 30s.; 2 drags, 8s.; 2 harrows, 6s.; chain harrow, 4s.; 2 rolls, 6s.; seed, £5 per cwt. = 25s. for an acre; couching, 10s.; sowing, 12s. or 1s. an acre = £4 10s. per acre		54 0 0
80 Acres of Aftermath at £3		240 0 0
120 Acres of Swedes and Turnips consumed by this flock, the cost of growing, including tillages and manures, also rents and rates, at £13 per acre, £4 per acre to sheep ...		480 8 0
120 Acres of Good Eweleage, fed solely by the sheep at 30s. an acre, to include rent and rates		180 0 0
Credits.		
Sheep sold		1277 6 0
Wool sold		715 16 0
Skins and casualties		8 8 6
Valuation on Sept. 4th, 1919.		
551 Breeding Ewes at 60s.		
191 Ewe Tegs at 48s.		
180 Sale Lambs at 40s.		
19 Odd Ewes at 50s.		
10 Rams at £5		2568 18 0
Manurial value of 46 tons cake	184 0 0	
ditto. 110 tons hay	220 0 0	404 0 0
Summary.		
Commencing valuation	2456 10 0	
Expenses	3749 0 9	6205 10 9
Receipts	2001 10 6	
Manurial Value ...	404 0 0	
Ending Valuation ...	2568 18 0	4974 8 6
		£1231 2 3
Add Interest on capital	150 0 0	
Management	150 0 0	300 0 0
Deficit ...		£1531 2 3

0

FARM No. 76.

County, DORSET.
Size of Farm.—600 acres arable, 150 acres pasture, 400 acres down.
System of Farming—Corn growing and sheep.

SHEEP No. 8.

SHEEP ACCOUNT FOR THE YEAR ENDED MICHAELMAS, 1919.

Debits.	£ s. d.	£ s. d.
Valuation—Michaelmas, 1918.		
600 breeding Dorset Down ewes at £4 15s.	2850 0 0	
300 Hogs at £2 10s.	750 0 0	
120 dos. Hurdles	97 12 0	
Cribs, troughs, &c.	12 0 0	
		3709 12 0
Expenses.		
400 acres down land at 23s. 6d. per acre	470 0 0	
105 acres roots at £4 per acre (prop. cost)	420 0 0	
50 acres catch crops at £5 per acre	250 0 0	
130 acres aftermath at 15s. per acre	87 10 0	
80 tons hay at £8	640 0 0	
16 tons linseed cake at £20 (one-third of usual amount)	320 0 0	
80 tons oats at 48s. per gr. ...	192 0 0	
20 tons peas at 86s. per gr. ...	86 0 0	
Labour see app. I.*	581 0 0	
Hurdles, 50 doz. at 25s.	62 12 0	
5 Rams	96 1 6	
Cost of dipping and dips, lambs twice	8 0 0	
Marketing expenses on wool ...	2 5 0	
Ointments, &c.	5 0 0	
General charges	10 0 0	
Interest on capital	250 0 0	
Management	200 0 0	
		3680 8 6
Credits.		
50 draft ewes at 88s. 6d.	221 15 0	
100 draft ewes at 80s. 6d. ...	402 10 0	
34 cull ewes at 71s. 6d.	124 14 0	
20 cull ewes (2 tooth) at 78s. ...	78 0 0	
100 lambs at 49s. 6d.	247 10 0	
150 lambs in hand	320 0 0	
60 draft ewes at 90s.	270 0 0	
10 ewes at 90s.	45 0 0	
2,800 lbs. wool at 4s. 2d. per lb.	583 6 8	
Skins	5 0 0	
		2297 15 8
Valuation—Michaelmas, 1919		£3709 12 0

Number of lambs, 596. About 100 under average. Few deaths amongst ewes.

Manurial value.

From roots and catch crops, already allowed for.	£ s. d.
16 tons linseed cake at 1s. 5d. cost ...	64 0 0
100 grs. peas and oats at 1s. 5d. cost ...	55 12 0
80 tons hay at 1s. 6d. cost	106 13 4
	£226 5 4

Summary.	£ s. d.		£ s. d.
Val. Mich., 1918	3709 12 0	Sales	2297 15 8
Expenses ...	3680 8 6	Manurial value	226 5 4
		Val. Mich., 1919	3709 12 0
		Deficit	1156 7 6
	£7390 0 6		£7390 0 6

*App. I.—Cost of Labour: thus—(A hilly farm and difficult to work.)

	£ s. d.
2 Shepherds and boy	334 0 0
Hacking roots at 7s. per acre	35 0 0
Lambing yard	1 10 0
Lambing, 3 men, 3 weeks	20 0 0
Horse labour—hauling roots, straw, &c. ...	40 0 0
Rearing lambs and lambing money	12 0 0
Castrating	1 10 0
Trimming feet—overtime	2 0 0
Washing	1 4 0
Shearing	18 0 0
Fairs and sales	1 0 0
Dipping	1 10 0
Cracking corn and mixing, &c.	9 2 0
Hauling corn	4 10 0
Horse labour—removing hurdles, cribs, troughs, &c., hauling water, hay, straw, &c.	100 0 0
	£581 6 0

FARM No. 77.

County, ESSEX.
Size of farm—160 Acres arable.
59 ,, pasture.
System of farming—Cropping on fine course and dairying.

MILK No. 8.

COST OF PRODUCTION OF MILK.

Period—Summer, May to September (inclusive), 1918.
Average number of Cows (including heifers) in herd during period, 31.
No. of Cows in milk during period, 26.

	£ s. d.	£ s. d.
Capital outlay.		
Value per head, £35. Total		1,085 0 0
Value of plant:—		
1 Oil Engine	40 0 0	
Chaff-cutter (new)	23 0 0	
Root Cutters	5 0 0	
Churns, Refrigerators, &c. ...	12 0 0	
Delivery Van	15 0 0	
Harness	5 0 0	
Milk Cob	20 0 0	
		120 0 0
		£1,205 0 0
Foods.		
Cows consumed May 1st to Sept. 30th.		
25 tons mangels at 30s. ...	37 10 0	
4 qrs. beans at 90s.	18 0 0	
Brewers' Grains, 100 bushels weekly at 9d.	82 10 0	
Cartage do.	16 0 0	
Cake purchased	33 14 3	
4 tons hay, chopped, at £5, 2 tons oat straw, chopped, at £3 ...	26 0 0	
2½ acres green maize at £8 ...	20 0 0	
Grazing. 42 acres pasture at £3 10s.	147 0 0	
Aftermath and young clovers, 20 acres	17 10 0	
Total foods		398 4 3
Labour—3 cowmen.		
W. Ratcliff at 38s., 22 weeks ...	41 16 0	
Bonus ...	4 16 0	
	46 12 0	
M. Moles at 38s., 22 weeks ...	46 12 0	
A. Griggs at 35s., do. ...	43 18 0	
	137 2 0	
Deduct Griggs' part time on farm	20 0 0	
		117 2 0
Depreciation and Loss on Cows during above period (22 weeks) ... ... (This is considered a fair approximate amount, as the number of cows, 31, is taken as an average throughout, and during the year I find 2 cows were lost which recently cost £37 10s. and £39.)		50 0 0
General Expenses.		
1 Proportion of rent and rates on 2 sets buildings	19 10 0	
2 Insurance live stock and premises	4 10 0	
3 Vet. attendance, cows only ...	4 0 0	
4 Shoeing smith, cob	18 0	
5 Paraffin oil and for engines, 7s. 6d. weekly	8 5 0	
6 Coal, ¼ ton	1 5 0	
7 Keep, bull, 22 weeks at 10s. ...	11 0 0	
8 Depreciation and repairs a/c to plant and utensils, viz., engines and cutters, delivery van and carts, cob, harness, &c., at 10 per cent. per annum on £120 value	5 10 0	
		54 18 0
Delivery.		
To town dairy, 2½ miles, twice daily, man and horse at 6s. 6d. per day, 22 weeks ... ... (This man, A. Totman, receives 33s. 6d. weekly.)		50 1 0
Interest on capital invested.		
31 cows at £35 } See details ...	1,085 0 0	
Plant } above ...	120 0 0	
	1,205 0 0	
Interest on £1,205 at 5 per cent. per annum (22 weeks) ...		25 10
Carried forward		£695 15

Farm No. 77—*continued.*

COST OF PRODUCTION OF MILK—*continued.*

Brought forward			£		695	15 3
Management.						
Allowance—as the farmer personally assists in milking and tending cows 3 or 4 hours every day, it is fair to charge for this and management at the rate of 25*s.* weekly, 22 weeks ...					27	10 0
					723	5 3
Credits.						
9 calves, sold at 50*s.*			22	10 0		
Manurial value, purchased food			4	0 0		
					26	10 0
Net cost					£696	15 3

Total yield of milk sold during above period, mostly wholesale, 6,929 gallons. Cost per gallon, 2*s.*

NOTE.—In this district the supply of natural food was exceptionally good during the whole period covered by this enquiry; the summer being unusually favourable for grass and all green crops; but the summer prices of milk were fixed so low that it was impossible to make a profit.

Milk sales book and labour statements available if required.

Period—Winter, October to April (inclusive), 1918-19.

Average number of Cows (including heifers) in herd during period, 34.

Number of Cows in milk during period, 28.

Capital outlay.	£	*s.*	*d.*	£	*s.*	*d.*
Value per head, £35. Total				1,190	0	0
Value of plant:—						
Oil Engine	40	0	0			
Chaff-cutter (new)	23	0	0			
Root Cutters	5	0	0			
Churns, Refrigerators, &c. ...	12	0	0			
Delivery Van	15	0	0			
Harness	5	0	0			
Milk Cob	20	0	0			
				120	0	0
				£1,310	0	0
Foods.						
Roots as grown on Farm and used for winter keep:—						
9 acres Mangels, 16 tons to acre at 25*s.*	180	0	0			
4 acres Swedes, 8 tons to acre at 30*s.*	48	0	0			
5 acres Kohlrabi, 10 tons to acre at 30*s.*	75	0	0			
16 acres White Turnips, 12 tons to acre at 20*s.*	192	0	0			
				495	0	0
Cake purchased and used Oct. to April				58	17	0
98 bushels brewers' grains weekly at 11*d.*				123	15	0
Cartage do.				22	10	0
10 tons hay (chaffed) at £7 10*s.*				75	0	0
10 ,, oat straw (chaffed) at 30*s.*				15	0	0
Grazing, 24 acres at £1				24	0	0
Labour—October 1st to April 30th, 1919				200	16	3
Depreciation and loss on cows during above period				92	0	0
General Expenses.						
1 Proportion of rent and rates on 2 sets premises	28	0	0			
2 Insurance, live stock and premises	6	2	0			
3 Vet. attendance, cows only ...	8	0	0			
4 Shoeing smith, cob	1	10	0			
5 Paraffin and oil, engines and light at 8*s.* weekly	12	0	0			
6 Coal, 1 ton	2	5	0			
7 Keep, bull, 30 weeks at 10*s.* ...	15	0	0			
8 Depreciation and repairs to plant and utensils, viz., engines and cutters, delivery van and carts, cob, harness, &c., 10 per cent. per annum on £120 value...	6	10	0			
				79	7	0
Carried forward				£1186	5	3

General expenses—*continued.*						
Brought forward					1186	5 3
Delivery to town dairy, 2½ miles once daily at 3*s.* 6*d.* per day ...					36	15 0
Interest on capital invested.						
34 cows at £35			1,190	0 0		
Plant			120	0 0		
			£1,310	0 0		
Interest on £1,310 at 5 per cent. per annum, 30 weeks					37	15 0
Management.						
Allowance—as the farmer personally assists during the whole of winter months 4 or 5 hours daily, milking and tending cows, it is fair to charge for this and management at rate of 30*s.* weekly					45	0 0
					£1,305	15 3
Credits.						
15 calves weaned or sold at 50*s.*					37	10 0
No charge for litter.						
					£1,268	5 3
Total yield of milk sold during above period, mostly wholesale, 11,974½ gallons	Cost per gallon				2	1½
	Less manurial value ...					1
	Net cost per gallon ...				2	0½

NOTE.—In this district we had the best crop of roots and winter keep that we have had for about 10 years, with present-day expenses it cannot be done at anything like above prices; a business that entails working 7 days a week and commencing at 4.30 in the morning surely should be remunerative to all concerned.

Milk sales book and labour statements available if required.

Special Statement of costs of Milk production for 7 days, August 11th to 17th inclusive.

				£	*s.*	*d.*
Mangolds, 1918 crop, as recently bought at 38*s.* per ton, 3 tons weekly at 38*s.*				5	14	0
Brewers' Grains, 150 bush. weekly at 11*d.* ...				6	17	6
Cartage do.					15	0
Green Clover, second crop, as cut from field and fed in stalls, ¾ acre weekly				5	0	0
Chaff, as fed with grains, *i.e.*,						
½ ton oat straw chaff	£2	0	0			
½ ton hay do.	5	0	0			
				7	0	0
No cake or meal used.						
Grazing.—Nothing charged, as owing to severe drought all meadows here are absolutely bare, and only stall feed obtainable.						
Labour.						
W. Ratcliff	£2	5	0			
D. Ratcliff	2	5	0			
M. Moles	2	5	0			
Griggs (part)	1	0	0			
Self	0	15	0			
				8	10	0
Delivery to town twice daily, man and horse at 7*s.*				2	9	0
Keep of bull				0	10	0
Proportion of rent and rates of buildings, 1/52nd part of annual charge				0	17	6
Depreciation and loss on cows, 1/52nd part of annual charge				1	10	0
Depreciation on machinery, oil engine, carts, &c.; insurance live stock and premises; Vet. (cows only); shoeing smith; paraffin for engine, &c.; incidental expenses and interest on capital, 1/52nd part of annual charges ...				2	5	0
				£41	8	0
Credits.						
Milk sold, wholsale, 348½ galls. at 1*s.* 8*d.* ...				29	0	10
36 galls. sold by retail at 2*s.* 2*d.*				3	18	0
1 calf sold				1	19	0
				£34	17	10
Total Milk for 7 days	384½ gallons.					
Yield of milk per cow per day ...	2⅛ ,,					
Average cost of milk per gallon	2*s.* 1¾*d.*					
Number of cows included in statement—						
(*a*) Number in milk				26		
(*b*) Number dry				4		
Total number ...				30		

FARM No. 78.

County, CHESHIRE.

MILK No. 9

COST OF PRODUCTION OF MILK
for Year 1st May, 1918, to 30th April, 1919.

Number of cows in herd ... 24
Average number in milk ... 20

First Period.—1st May, 1918, to 30th October, 1918.

	Details. £ s. d.	Total £ s. d.
Grazing. 30 acres at £2 per acre ...		60 0 0
Slag Dressing at 4 cwt. per acre at 3s. 6d. per cwt.		21 0 0
Labour.		
Sowing. 3 days at 6s. per day ...	0 18 0	
Harrowing. 2 days at 14s. per day	1 8 0	
Rolling. 3 days at 15s. per day ...	2 2 0	
Fencing, draining and ditching. 2 men 9 days, at 6s. per day ...	5 8 0	
Nails, staples and rails	0 17 6	
Milking. 8 hours per day at 8d. per hour 5s. 4d. per day for 154 days	51 7 0	
		62 0 6
Aftermath. 30 acres at 15s. ...		22 10 0
Purchased Foods		
4 tons 18 cwt. wheat offals at £15 per ton	73 10 0	
2 tons 10 cwt. cotton cake at £21 per ton	44 2 0	
1 ton 10 cwt. dairy meal at £17 10s. per ton	26 5 0	
		143 17 0
Depreciation and Losses.		
Losses due to abortion and deaths. 10 per cent. on capital	48 0 0	
Depreciation on value of cows during period at £5 5s. per head	126 0 0	
		174 0 0
General Expenses.		
Repair and Renewal of churns and dairy utensils. 10 per cent. on £100	5 0 0	
Coal	0 9 0	
Water charge	1 10 0	
Insurance on stock	1 10 0	
		8 9 0
Delivery. Estimated at ½d. per gallon		16 0 6
Interest on Capital.		
5 per cent. on average value of 24 at £40 each (6 months)		24 0 0
Management. 25s. per week for 26 weeks		32 10 0
		£564 7 0
Credit.		
16 calves at 31s. each ...		24 16 0
No deduction for manure.		
Total cost		£539 11 0

Total milk yield, 7,692 gallons.
Cost per gallon, 1s. 5d.

Second Period.—1st November, 1918, to 30th April, 1919.

Number of cows in herd ... 24
Number of cows in milk ... 20

	Details. £ s. d.	Total. £ s. d
Foods.		
Fodder, 1 ton 10 cwt. hay per cow, 24 cows: Total 36 tons at £7 15s. per ton	279 0 0	
1 ton straw per head at £2 per ton	48 0 0	
3 tons 2 cwts dairy meal at £19 per ton	58 18 0	
2 tons 6 cwts cotton cake at £21 ...	48 6 0	
3 tons 5 cwts. linseed cake at £20 10s. per ton	66 12 6	
3 ton 1 cwt. wheat thirds at £15 per ton	45 15 0	
		546 11 6
Labour.		
Cowman's wages, 1s. per cow per week	31 4 0	
Milking, 6 hours per day at 8d. per hour	36 8 0	
		67 12 0
Carried forward		£614 3 6

Farm No. 78—*continued.*

	£ s. d.	£ s. d.
Brought forward		614 3 6
Depreciation and losses.		
Losses due to abortion and deaths. 10 per cent. on value of herd ...		48 0 0
General expenses.		
Rates on buildings	3 0 0	
Repair and renewal of churns and dairy utensils, refrigerator and sundries. 10 per cent. on £100	5 0 0	
Coal	10 0	
Water charge	2 0 0	
Oil for lighting	12 0	
Brushes and tools	10 0	
Insurance on live stock	1 10 0	
Medicines for stock	1 10 0	
		14 12 0
Delivery.		
Estimated at 1s. 2d. per gallon ...		8 17 6
Interest on capital.		
5 per cent. on average value of 24 cows at £40 each		24 0 0
Management.		
25s. per week for 26 weeks ...		32 10 0
Total ...		£742 3 0
Credit.		
Take on appreciation in average value of stock during period at £5 5s. per head	126 0 0	
16 calves at 31s. each	24 16 0	
		150 16 0
		£591 7 0

Total yield of milk, 4,260 gallons.

	s.	d.
Cost per gallon	2	9
Less manurial value ...		3 (no charge for litter).
Net cost per gallon ...	2	6

Annual yield per cow, 408 gallons.

FARM No. 79.

County, CHESHIRE

Size of Farm: 195 acres arable. 60 acres pasture.
Soil: Light medium
System of Farming: Mixed. Rotation: Roots, wheat, clover (2 or 3 years), oats. Milk production.
Previous crops: 19 acres potatoes, ¾ acres turnips, 1½ acres mangels.

WHEAT No. 42.

COST OF PRODUCTION OF 24 ACRES WHEAT, 1918 CROP.

	£ s. d.	£ s. d.
Rent		48 0 0
Local Rates		4 0 0
Manures: 15 tons dung per acre on potatoes, £9 10s. per acre. Charge £5 10s. to potatoes, £3 to wheat and £1 to clover		72 0 0
Proportion clearing costs from potatoes ...		18 0 0
Seed. 20 sacks at 47s. per sack		47 0 0
Cultivations.		
Ploughing at 25s. per acre	30 0 0	
Harrowing, 2½ days	5 12 6	
Sowing, 2 men and 4 horses, 3 days	7 19 0	
Harrowing, 1 horse and man, 3 days	2 14 0	
Rolling, do. do.	2 14 0	
Weeding, 6 men, 2 days	4 16 0	
		53 15 6
Harvesting.		
Cutting, at 15s. per acre	18 0 0	
Setting up, 6 men, 3 days	7 4 0	
Carting, 3 one-horse carts, 2 reachers, 1 extra loader, 3 men, stacking, 2 days	8 14 0	
Thatching and materials	6 0 0	
		39 18 0
Threshing.		
Thresher at £6 11s. per day, 3 days	19 13 0	
8 men at 9s. per day, do	10 16 0	
		30 9 0
Carting to station		6 0 0
Use of Machinery and Implements		20 0 0
General Expenses, including fencing, ditching, etc.		15 0 0
Interest on Capital		13 8 0
Management		24 0 0
Total Cost		£391 10 0
Cost per acre		£16 6 3

Actual Yield, 192 sacks, or 4 qrs. per acre, Grain, and 1¼ tons Straw.

Farm No. 79—*continued.*

MILK No. 10.

Farm: 255 acres of medium soil.

COST OF PRODUCTION OF MILK.

Summer period, May 1st to September 30th, 1918.

Average Number of Cows in period ...	30.		
,, ,, Milk ...	28.		
	£	s.	d.
Average value per head, £45	1,350	0	0
Rations, per cow, per day:			
May 1st to 15th: 40 lbs. mangolds, 10 lbs hay, 3 lbs, ground oats, 2 lbs. linseed cake, 2 lbs. cotton cake.			
May 16th to August 31st: 2lbs. linseed cake, 2 lbs. cotton cake and pasture.			
August 1st to 31st: 6 lbs. small potatoes and pasture.			
September 1st to 30th: 3 lbs. linseed cake, 3 lbs. cotton sake, 6 lbs. small potatoes and pasture.			
Foods.			
35 acres of pasture, rent and rates ...	73	0	0
34 acres of 2nd crop of clover, grazed ...	68	0	0
Home grown food—mangolds, hay and potatoes	39	10	0
Purchased foods—linseed and cotton cake, 8 tons	172	0	0
Labour.			
1 cowman at £2 per week—¼ of his time ...	33	0	0
5 extra men milking, 2 hours per day at 9*d.* per hour	57	0	0
Depreciation.			
13 cows and heifers bought, costing ... 576 15 0			
8 sold (including 1 found dead) ... 233 17 6			
5 heifers valued at £40 each 200 0 0			
433 17 6	142	17	6
General Expenses.			
Share of rent and rates on buildings ...	5	10	0
Coal and oil	10	0	
Veterinary expenses and medicines ...	2	5	0
Upkeep of implements and utensils ...		10	0
Insurance		12	6
Keep of bull at 10*s.* per week	11	0	0
Delivery. ½*d.* per gallon charged on milk sold as this is collected at the premises 7,911 galls. at ½*d.* per gall	16	9	7
Interest on capital—£1,400 at 5 per cent. per annum	35	0	0
Management, including rail exs., marketing, etc.	10	0	0
Share of cost of lime applied to pasture—39½ tons in 1916 at 20*s.* 6*d.* per ton...	14	10	0
Cutting hedges and thistles	1	15	0
	2,033	9	7
Credit manurial value—⅓ of cost of cake 28 13 4			
4 calves sold at £2 each ... 8 0 0	36	13	4
	£1,996	16	3
September 30th. Estimated value of 30 cows at £45 per head	1,350	0	0
Net Cost ...	£646	16	3
Total quantity of milk sold and used: 7,911 galls. sold at controlled prices ...	458	1	8
462 ,, ,, to workmen and used in house at 1*s.* 4*d.* per gall.	30	16	0
Total ...	£488	17	8

Cost of milk per gallon 1*s.* 6½*d.*

Remarks.—Feeding stuffs, difficult to obtain and quality inferior—8 cows aborted, causing the yield of milk to be below average.

Winter period October 1st, 1918, to April 30th, 1919.

Average No. of Cows in period ...	30.		
,, ,, ,, milk ...	28.		
	£	s.	d.
Average value per head, £45	1,350	0	0
Rations, per cow, per day: 40 lbs. roots, turnips and potatoes. 20 lbs. hay, 5 lbs. straw, 4 lbs. cake. 2 lbs. bean or maize meal, 3 lbs. oats and 2 lbs. sharps.			
Food. Home grown.			
54 tons 5 cwts. hay at £7 per ton ...	379	15	0
13 tons 10 cwt. straw at 72*s.* 6*d.* per ton	48	18	9
112½ tons roots at 30*s.* per ton	168	15	0
450 bushels oats at 7*s.* per bushel	157	10	0
Food purchased. Cake, bean and maize meal, sharps and bran (as per bills) ...	365	5	0
Labour.			
Cowman at £2 per week—30 weeks ...	60	0	0
Assistant, half-time—30 weeks	15	0	0
5 extra men milking—2 hours per day at 9*d.* per hour	78	15	0
Depreciation. £ s. d.			
3 cows and 11 heifers bought 641 10 0			
3 home-bred heifers 120 0 0			
5 heifers brought forward from previous half-year ... 200 0 0			
£1,061 10 0			
16 cows and 6 heifers sold realising 923 4 2			
	37	15	10
General Expenses.			
Rent and rates on buildings	5	10	0
Coal and oil, white washing shippon twice	2	10	0
Veterinary Surgeon and medicines ...	4	5	0
Insurance		12	6
Keep of bull	5	0	0
Delivery. ½*d.* per gallon charged for collecting ...	22	15	2
Interest on capital. £1,400 at 5 per cent. per annum	35	0	0
Management.			
Marketing expenses, etc.	20	0	0
Cost of town's water for the year	6	0	0
	£2,763	7	3
Credit—Manurial value. 200 tons at 8*s.* per ton ... £80			
5 calves sold at 30*s.* each ... £7 10*s.*	87	10	0
	£2,675	17	3
April 30th, 1919. Estimated value of 30 cows at £45 per head	1,350	0	0
Total ...	£1,325	17	3

Cost per gallon is 2*s.* 4½*d.*

Total yield of Milk.				
10,382 galls.	sold wholesale at control prices	1,070	11	9
640 ,,	sold to workmen and used in house	64	0	0
210 ,,	used for calf rearing ...	21	0	0
11,232 galls.		£1,155	11	9

Note.—Average yield per cow per annum fully 600 gallons.

FARM No. 80.

County, BERKS.

Size of Farm—120 acres arable. 205 acres pasture.

System of Farming.—Cropping and Dairying.

MILK No. 11.

COST OF PRODUCTION OF MILK.

First Period—May 1st to September 30th, 1918

Average number of cows in milk ...	65					
,, ,, dry ...	11					
Total number of cows ...	76					
		£	s.	d.	£	s. d.
Foods. Purchased including carting		263	9	8		
,, Home grown green crop (maize)		20	0	0		
Grazing. 85 acres pasture ...		133	10	0		
,, Aftermath		28	15	0		
					445	14 8
Carried forward					£445	14 8

Farm 80—*continued.*

COST OF PRODUCTION OF MILK—*continued.*

Brought forward £

	£	s.	d.
Labour	167	9	10
Depreciation on cows	131	3	5
General Expenses.			
Rent and rates on buildings ... 30 0 0			
Coal, petrol and paraffin ... 14 0 0			
Veterinary expenses and medicines 10 0 0			
Depreciation.			
Upkeep utensils including milking machine 29 16 0			
Insurance 5 0 0			
Keep of 3 bulls 33 0 0			
	121	16	0
Delivery. Upkeep horse and cart	21	0	0
Interest on capital 5 per cent. per annum—see below	24	10	5
Management at £3 per week ...	63	0	0
	1030	14	4
Credits to be deducted.			
Calves—28 at 50*s.*	70	0	0
	£960	14	4

Total yield of milk 21,223 gallons.
Cost per gallon 10¾*d.*

FOODS—May 1st to September 30th.

	£	s.	d.
Purchased. 10 tons dairy cakes and meal ...	261	0	8
Carting from station at 3*s.* 6*d.* per ton ...	2	9	0
	£263	9	8
Home Grown. Maize	£20	0	0
Pasture. 85 acres. Share rent and rates ...	85	0	0
Harrowing and rolling at 5*s.*	21	5	0
Thistle cutting 1*s.* 6*d.*	6	8	0
Carting liquid manure	6	0	0
Fencing, &c.	14	17	6
	£133	10	0
Aftermath at 10*s.* per acre	£28	15	0

Labour. May to September, 1918.

	£	s.	d.
3 men at £1 12*s.* 0*d.* for 14 weeks ...	68	5	0
3 ,, £1 14*s.* 0*d.* ,, 7 ,, ...	35	14	0
1 ,, £1 10*s.* 6*d.* ,, 14 ,, ...	21	7	0
1 ,, £1 11*s.* 0*d.* ,, 7 ,, ...	10	17	0
1 boy at £1 5*s.* 0*d.* ,, 21 ,, ...	26	5	0
1 ,, 19*s.* 0*d.* for 21 weeks	19	19	0
1 ,, 8*s.* 0*d.* for 18 weeks	7	4	0
1 ,, 10*s.* 0*d.* for 3 weeks	1	10	0
	191	1	0
4 cottages at £7 per year each...	11	13	4
7 men and boys 1 pint milk each per day, 129 galls. 1*s.* 4½*d.*	8	17	6
	211	11	10
Allowance time spent at other work, at 1*s.* per man per day on 7 men	44	2	0
	£167	9	10

Depreciation. May to September.

	£	s.	d.		£	s.	d.
May 1. 77 cows on hand, £45	3465	0	0	1 cow sold ...	37	6	7
June 28. 1 cow bought ...	57	10	0	1 ,, ...	1	0	0
,, ...	45	0	0	1 ,, ...	44	0	0
Aug. 6. 5 heifers in calf ...	237	0	0	1 ,, ...	1	0	0
Sept. 10, 1 cow	55	0	0	1 ,, ...	45	0	0
				Sept. 30. 80 cows on hand, £45	3600	0	0
				Depreciation ...	131	3	5
	£3859	10	0		£3859	10	0

	£	s.	d.
Interest on capital.			
Average number cows in herd—76 at £45 ...	3420	0	0
Milking machine	110	0	0
Engines	75	0	0
Farm preparing machinery	100	0	0
Churns and small utensils	80	0	0
Horse, cart and harness	80	0	0
5 per cent. per annum ... £193 5*s.*			
Interest for 5 months ... £80 10*s.* 5*d.*	£3865	0	0

Second Period—October 1st, 1918, to April 30th, 1919.

	£	s.	d.	£	s.	d.
FOODS—Purchased including carting	700	17	9			
,, Home grown roots, hay and straw	932	12	0			
,, Carting roots to farm, 400 tons at 2*s.* 6*d.* ...	50	0	0			
,, Grazing, aftermath ...	16	0	0			
				1699	9	9
Labour				360	0	2
Depreciation on cows—see below				177	7	2
General expenses.						
Rent and rates on buildings ...	42	0	0			
Coal, petrol and paraffin ...	22	10	0			
Veterinary medicine	14	0	0			
Depreciation and upkeep, utensils	47	10	0			
Insurance	7	0	0			
Keep of bulls (3)	45	15	0			
				178	15	0
Delivery, £1 per week upkeep horse and cart				31	0	0
Interest on capital at 5 per cent. per annum—see below				115	7	1
Management at £3 per week ...				93	0	0
				£2654	19	2
Credits to be deducted, 36 calves at 50*s.*				90	0	0
				£2564	19	2

Average number of cows in milk ... 64
,, ,, dry ... 14
Total cows ... 78

Total yield of milk 22,969 gallons 5 pints.
Cost per gall. 2*s.* 2¾*d.*
Less manurial value 2*d.*
Net cost per gall. 2*s.* 0¾*d.*

FOODS—October to April.

	£	s.	d.
Purchased Foods.			
28 tons cakes and meals, including carting	508	7	5
8 tons topps and bran, including carting ...	123	4	10
22 qrs. oats and barley, including carting ...	69	5	6
	£700	17	9
Home Grown Produce.			
400 tons mangels at £1	400	0	0
Hay, £7 per ton. Straw £3 10*s.* per ton ...	532	12	0
	£932	12	0
Aftermath at 5*s.* per acre	£16	0	0

Labour—October to April.

	£	s.	d.
3 men at 35*s.*, 22 weeks.	115	10	0
3 men at 38*s.*, 9 weeks.	51	6	0
1 man at 33*s.*, 22 weeks	36	6	0
1 ,, 36*s.*, 9 ,, ...	16	4	0
1 ,, 25*s.*, 4 ,, ...	5	0	0
1 ,, 31*s.*, 9 ,, ...	13	19	0
1 ,, 33*s.*, 9 ,, ...	14	17	0
1 ,, 35*s.*, 9 ,, ...	15	15	0
1 boy at 23*s.*, 5 ,, ...	5	15	0
1 ,, 26*s.*, 17 ,, ...	22	2	0
1 ,, 29*s.*, 9 ,, ...	13	1	0
1 ,, 11*s.*, 5 ,, ...	2	15	0
1 ,, 14*s.*, 17 ,, ...	11	18	0
1 ,, 16*s.*, 9 ,, ...	7	4	0
	331	12	0
4 cottages at £7 per year each	16	6	0
7 men and boys, 1 pint milk each per day, 190 gallons at 2*s.* 3*d.*	21	7	0
	369	6	0
Allowance time spent at other work, 1 boy 6*s.* per week	9	6	0
	£360	0	0

Farm No. 80—*continued.*

Depreciation on Cattle. October to April.

	£	s.	d.				
Oct. 1, 80 cows on hand, £45	3600	0	0	Oct. 1, 1 cow sold	35	4	5
1 cow bought ...	42	0	0	Nov. 9 ,,	57	0	0
1919.				Nov. 28 ,,	31	8	7
Jan. 11, 1 heifer bought ...	53	0	0	Dec. 5 4 ,,	124	0	0
Mar. 17, 1 cow bought ...	39	18	0	Dec. 28 1 ,,	34	7	7
				1919.			
				Jan. 4 ,,	6	0	0
				Feb. 8 ,,	49	3	4
				Feb 15 ,,	10	0	0
				Feb. 22 2 ,,	66	0	0
				Apl. 15 1 ,,	48	16	11
				Apl. 30 75 cows on hand ...	3375	0	0
	3734	18	0				
6 heifers own bred ...	270	0	0				
	4004	18	0				
	£3827	10	10		£3827	10	10
Depreciation ...	£177	7	2				

Interest on capital. October to April 30th.

Average No. of cows in herd, 78 at £45 ...			3510	0 0
Milking machine			110	0 0
2 Engines			75	0 0
Food preparing machinery			100	0 0
Churns and small utensils			80	0 0
Horse, cart and harness			80	0 0
5 per cent. per annum ...	£197	15*s.*	0*d.*	
Interest for 7 months ...	£115	7*s.*	1*d.*	£3955 0 0

FARM No. 81.

County, CHESHIRE.

Size of Farm: 164 acres arable. 44 acres pasture.
System of Farming: Cropping and Dairying.

MILK No. 12.

First Period—1st May to 30th September, 1918.
Number of cows in herd ... 30
Number of cows in milk ... 26

Food—First two weeks in May.	£	s.	d.	£	s.	d.
7 st. hay per week each at £6 per ton	15	15	0			
40 lbs. roots per cow per day at £2 per ton	15	0	0			
3 lbs. oats per cow per day at 48*s.* per quarter	9	0	0			
5 lbs. cake per cow per day at 18*s.* 6*d.* per cwt.	17	6	10			
Brewers' grains, 40 loads at 6*s.* (9 loads per ton)	12	0	0			
				69	1	10
Grass.						
30 acres at 39*s.* 4*d.*	59	0	0			
40 acres aftermath at 15*s.* ...	30	0	0			
				89	0	0
Brewers' grains on grass—						
380 loads at 6*s.*	114	0	0			
35½ quarters oats at 48*s.* ...	85	4	0			
107 cwts. cake at 18*s.*	96	6	0			
				195	10	0
Labour.						
2 weeks, 1 man, £4	4	0	0			
Milkers, 140 hours at 9*d.* ...	5	5	0			
19 weeks, 1 man, half-time ...	19	0	0			
Milkers, 70 hours per week at 9*d.*	49	17	6			
				78	2	6
Depreciation and loss on cows (*see* Appendix)				93	0	0
General expenses.						
Rates on buildings, £17 per annum, say £10 for milk cows	4	5	0			
Upkeep of machinery, utensils, coal, oil, &c.	14	10	0			
Fire insurance	1	10	0			
Workmen's insurance	1	0	0			
				21	5	0
Cartage to station—5 miles.						
Man, 25*s.* per week, horses 20*s.* per week				47	5	0
Interest on capital.						
5 per cent. on £1,140 for 21 weeks				21	10	0
Management at 30*s.* per week ...				31	10	0
Total				£646	4	4
Deduct for six calves				12	0	0
				£634	4	4

Total yield, 8,814 gallons.
Cost per gallon, 1*s.* 5½*d.*

Second period—1st October, 1918, to 30th April, 1919.
Number of cows in milk, 26; dry, 4.

Foods.	£	s.	d.	£	s.	d.
Hay, 7 st. per cow per week at £8 per ton	325	10	0			
Roots, 40 lbs. per cow per week at £1 per ton	116	5	0			
Oats, 290½ cwts. at 16*s.*	232	8	0			
Brewers' grains, 620 loads at 6*s.* 6*d.*	201	10	0			
Cake, 290 cwts at 18*s.*	261	0	0			
10 tons cut straw at £2	20	0	0			
				1,156	13	0
Labour.						
1 man, full time	62	0	0			
1 man, half-time	31	0	0			
Milkers, 3 extra at 31*s.* 6*d.* per week	48	16	6			
				141	16	6
Depreciation and loss on cows (*see* Appendix I)				130	19	0
General expenses.						
Rates	6	0	0			
Machinery and utensils, coal, etc.	20	18	0			
Oil for grinding, etc.	7	10	0			
Insurances	3	0	0			
				37	8	0
Cartage to station—horse 25*s.*, man 20*s.*, per week				69	15	0
Interest on capital.						
5 per cent. on £1,140, 31 weeks				36	10	0
Management, at 30*s.* per week, 31 weeks				46	10	0
Total				£1,619	11	6
Deduct for 10 calves at £2				20	0	0
Total cost				£1,599	0	0

Milk production, 11,850 gallons.

	s.	d.
Cost per gallon	2	8½
Less manurial value ...		2
Net cost per gallon ...	2	6½

Appendix I.

Depreciation and loss on cows.

14 cows purchased during year ...	£505	0	0
14 cows sold (1 died)	281	1	0
	£223	19	0

Valuation same at end as at beginning of year.

WHEAT No. 43.

COST OF PRODUCTION OF WHEAT CROP—1919 CROP.

(Men and horses at £1 per day.)	£	s.	d.	Per acre. £	s.	d.
Rent				1	14	0
Rates					5	4
Manure, 1 cwt. Sulph. Amm., 3 cwts. Supers				2	0	0
Lime, proportion of (25 cwts. per acre, at 27*s.* 6*d.* per ton)					7	0
Seed, 3½ bushels per acre and dressing				1	15	0
Cultivations.						
Skim ploughing	1	5	0			
Two harrowings		7	0			
Two cultivatings		15	0			
Ploughing	1	10	0			
Two harrowings		7	0			
Sowing, 1 man, 2 horses, 7 acres		3	6			
Harrowing after sowing ...		3	6			
Harrowing in spring		3	6			
Rolling		2	0			
				4	16	6
Harvesting.						
Opening round		1	6			
Cutting, 7 acres per day, 3 horses		4	6			
Twine		6	0			
Stooking		3	0			
Carting		11	0			
Thatching and materials ...		7	6			
				1	13	6
Threshing, 6 acres per day, including coals				1	5	0
Carting to station, 5 miles ...					13	0
Use of machinery and implements					12	6
General expenses					10	0
Interest on capital					12	0
Management					15	0
Total cost				£16	18	10

Average yield over 5 years—24 bushels grain, 30 cwts. straw.

NOTE.—No allowance made for manurial residues after clover.

FARM No. 82.

County, LEICESTER.

MILK No. 31.

PARTICULARS OF FARMING TRANSACTIONS, *Re* COST OF MILK PRODUCTION from Oct. 1, 1917, to August 9th, 1919.

NOTE.—This statement is vouched for by a chartered accountant. The farmer has other farms from which he gets his living.

Size of Farm 30 acres arable, 70 „ pasture } Plus accommodation land.

Total number of cows kept 50
Average number of cows in milk ... 35

	£	s.	d.
Sundry payments, carriage, artificial manures, repairs, etc.	552	3	5
Rent (one year, 10 months, 9 days), Farm A ...	365	0	0
Rates „ „ „ ...	44	9	0
Rent „ „ Farm B ...	160	8	4
Rates „ „ „ ...	9	0	0
Depreciation	40	0	0
Seeds bought	82	16	6
Feeding stuffs bought for the period	1,415	2	8
Depreciation and loss of dairy cows (*see* App.)	272	0	0
Interest for period on £2,250 at 5 per cent. (estimated value of dairy cows)	206	5	0
Wages paid for the period	1,164	12	6
	£4,311	17	5
Deduction.			
Sales of wheat, barley, calves, etc. 724 6 7			
Foodstuffs on hand 74 15 0			
	799	1	7
	£3,512	15	10

Total production of milk from Oct. 1st, 1917, to August 9th, 1919, 35,880 gallons.
Average cost per gallon for 1 year, 10 months 9 days, 1*s.* 11½*d.*

Appendix.

1st Oct., 1917.	£	s.	d.		£	s.	d.
50 cows ...	2,250	0	0	3 cows sold ...	19	0	0
9 heifers brought in	405	0	0	3 cows sold barren ...	60	0	0
1 heifer brought in	36	0	0	3 cows sold ...	88	10	0
				1 died ...	1	10	0
				9th Aug., 1919			
				50 cows ...	2,250	0	0
				Depreciation	272	0	0
	£2,691	0	0		£2,691	0	0

[NOTE.—In the above statement, the milk is credited with the profit or debited with the loss, as the case may be, on produce other than milk.]

FARM No. 83.

County, CHESHIRE.

Size of Farm: 24 acres arable, 148 acres pasture.
Soil: Heavy.

MILK No. 14.

COST OF MILK PRODUCTION.

May 1st to September 30th, 1918.

1. Foods (excluding grazing).	£	s.	d.	£	s.	d.
(*a*) Home Grown						
(1) Fodder, green crops ...	—					
(2) Roots	—					
(3) Grain	—					
(*b*) Purchased						
(1) Fodder	—					
(2) Roots	—					
(3) Cake, meal, etc. ...	550	11	0			
(4) Other purchased food...	—					
				550	11	0
2. Grazing.						
(*a*) Pastures, 120 acres at 28*s.* 6*d.*	170	0	0			
(*b*) Aftermath, 28 acres at 10*s.*	14	0	0			
				184	0	0
3. Labour. (*See* details below)				220	11	0
4. Depreciation and loss on cows				770	0	0
5. (*a*) Proportion of rent of buildings	14	0	0			
(*b*) Proportion of rates on buildings	3	1	4			
(*c*) Proportion of rates on land (120 acs.)	9	2	0			
				26	3	4
Carried forward				£1,751	5	4

	£	s.	d.	£	s.	d.
Brought forward				1,751	5	4
6. Keep of bull (included above)						
7. Depreciation of machinery and utensils				12	10	0
8. Repairs and renewals.						
(*a*) Machinery	1	10	0			
(*b*) Implements and utensils ...	1	15	0			
				3	5	0
9. Miscellaneous.						
(*a*) Insurance of livestock for 5 months ...	1	0	0			
„ buildings ...		3	0			
„ machinery ...			6			
„ men	1	9	2			
				2	12	8
(*b*) Coal, 5 tons at 38*s.* 4*d.* ...	9	11	8			
(*c*) Veterinary Surgeon and medicine	6	0	0			
(*d*) 4 tons raw bone applied Jan., 1916	5	0	0			
(*e*) Keep of float horse, 5 months	11	0	0			
				31	11	8
				1,801	4	8
Credit.						
Number of calves sold during period, 5 at 50*s.*	12	10	0			
Profit on pigs, less marketing expenses	255	0	0			
				267	10	0
				£1,533	14	8

Yield of milk for period 24,008 gallons.
„ „ per cow per day 2⅔ „
Average cost per gallon of milk, 1*s.* 3½*d.*
Milk sold for 3 months and no charge made for delivery except by keep of horse and labour items.

Number of cows in statement:
Average number in milk ... 66
„ „ dry ... 4
Total number of cows ... 70

Depreciation on cows ... ... 70 at £10 = £700
Loss on cows 5 per cent. per annum on value = £70
Total £770

PARTICULARS.

Cake and meal purchased:
80 bags crushed oats 0/135 lbs.
68 „ Indian meal 0/240 „
46 „ thirds.
22 „ bran.
10 ton 7 cwt. dairy meal.

Labour.	£	s.	d.
Cowman, part time, 22 weeks at 30*s.* ...	33	0	0
3 workmen, 22 weeks each at 12*s.* 6*d.* ...	41	5	0
4 milk women, 22 weeks each at 8*s.*	35	4	0
Dairymaid, full time, 22 weeks at 30*s.*	33	0	0
2 maid servants, milking only, 22 weeks each at 8*s.*	17	12	0
Cutting thistles, 120 acres at 1*s.*	6	0	0
Rolling, 1 man and horse, 20 days at £1...	20	0	0
Hedging and ditching, 1 man 10 weeks at 36*s.*	18	0	0
Self, milking, etc., 22 weeks at 15*s.*	16	10	0
	£220	11	0

Not being able to separate the meal used for cattle from the meal used for pigs, I have credited the whole of the profit made from pigs to the cost of production of milk.
Manure is set against management, establishment charges, and interest on capital.

COST OF MILK PRODUCTION.

October 1st, 1918, to April 30th, 1919.

1. Foods (excluding grazing).	£	s.	d.	£	s.	d.
(*a*) Home grown.						
(1) Fodder	101	5	0			
	488	0	0			
(2) Roots	50	0	0			
(3) Grain	409	15	0			
				1,049	0	0
(*b*) *Purchased*						
(1) Fodder	35	0	0			
(2) Roots	90	0	0			
(3) Cake meal, etc. ...	525	6	0			
				650	6	0
2. Grazing.						
(*a*) Pastures, 120 acres at 6*s.* 6*d.*	39	0	0			
(*b*) Aftermath, 28 acres at 5*s.*	7	0	0			
				46	0	0
Carried forward				£1,745	6	0

Farm No. 83—*continued.*

COST OF MILK PRODUCTION—*continued.*

			£	s.	d.
	Brought forward		£1,745	6	0
3. Labour			208	16	0
4. Depreciation on cows—nil. Loss on cows 5 per cent. per annum on value			71	9	6
5. (*a*) Proportion of rent on buildings	19 12 0				
(*b*) Proportion of rates on buildings	3 1 4				
(*c*) Proportion of rates on land (120 acres)	13 7 10				
			36	1	2
6. Keep of bull (included above)			—		
7. Depreciation of machinery and utensils £300 value			17	10	0
8. Repairs and renewals.					
(*a*) Machinery	2 16 0				
(*b*) Implements and utensils	1 17 6				
			4	7	6
9. Miscellaneous.					
Veterinary Surgeon and medicine	8 0 0				
Coal, 5 tons at 38*s*. 4*d*.	9 11 8				
			17	11	8
Insurance on livestock (7 months	1 8 6				
,, ,, buildings	4 2				
,, ,, machinery	7				
,, ,, men	2 2 6				
			3	15	9
Petrol and oil for engine	12 0 0				
Paraffin for shippon lamps	2 0 0				
			14	0	0
Keep of float horse 30 weeks	30 0 0		30	0	0
			2,148	17	7
Credit.					
40 calves at 30*s*.	60 0 0				
Profit on pigs less marketing expenses	75 0 0				
Appreciation in value of cattle	700 0 0				
			835	0	0
			1,313	17	7
Add delivery of milk to station (hired) at ¾*d*. per gallon			43	15	0
			£1,357	12	7

Yield of milk for period 14,030 gallons.
,, ,, per cow per day 1·95 gallons.
Average cost per gallon, 1*s*. 11¼*d*.

Average number of cows in milk	...	40
,, ,, ,, dry	...	30
Total number of cows	...	70

Value October 1st, 1918, £2,450.
,, April 30th, 1919, £3,150.

PARTICULARS.

1. (*a*) Fodder. 28 acres = 56 tons at £8, also 3 acres wheat, 21 acres oats.
Roots. 1 acre mangolds, 25 tons at £2.
Grain. 21 acres oats at 6 qrs. per acre.
Less 6 qrs. not used on April 30th.
Price, 27*s*. 6*d*. per bag of 135 lbs.
(*b*) 100 bags Indian meal.
10 ,, crushed oats.
104 ,, thirds.
37 ,, bran.
4 tons cake.
10 tons oat straw.
36 tons turnips and carting, 7 miles.

Labour.
2 milk women, 18 weeks each at 8*s*. full-time.
,, 12 ,, ,, 4*s*. half-time.
1 ,, 14 ,, ,, 8*s*. full-time.
,, 16 ,, ,, 4*s*. half-time.
1 ,, 5 ,, ,, 8*s*. full-time.
,, 4 ,, ,, 9*s*. full-time.
Cowman, 30 weeks at 48*s*. full-time.
Under do. ,, ,, 42*s*. ,,
Waggoner ,, ,, 8*s*. milking only.
Self ,, ,, £1.

Not being able to separate the meal used for the pigs from that used by cows, I have deducted the profit made by pigs from the cost of milk production.
Manure is set against management, establishment charges and interest on capital.

Farm No. 84.

County, SUSSEX W.

Size of Farm. 600 acres.

MILK No. 15.

COST OF MILK PRODUCTION.

Summer period—May to September, 1918.

Foods.

	£	s.	d.	£	s.	d.
5 tons 12 cwts. hay at £6 ...				33	12	0
2 acres maize.						
3 Ploughings at 25*s*. per acre ...	3	15	0			
3 Cultivations at 4*s*. 6*d*. per acre		13	6			
5 Harrowings (heavy) at 3*s*. 6*d*. per acre		17	6			
4 Rollings at 2*s*. 6*d*. per acre ...		10	0			
2 Harrowings (light) at 2*s*. 0*d*. per acre		4	0			
Picking and carting couch per acre		15	0			
2 Chain harrowings at 2*s*. 6*d*. per acre		5	0			
Drilling seed, 2 men and boy at 3*s*. per acre		3	0			
1 Harrowing in seed at 2*s*. per acre		2	0			
1 Rolling in seed at 2*s*. 6*d*. per acre		2	6			
3 Horse hoeings (man and boy) at 7*s*. per acre	1	1	0			
3 times hand hoeing (man and boy) at 7*s*. per acre	2	10	0			
Charged half to cows				10	18	6
4 Horses, man and boys carting dung to mix	1	2	0			
Filling same		8	0			
5 Horses, man and 2 boys drawing out dung from mix to field	1	6	6			
Filling and spreading same ...		10	0			
6 cwt. manure at 7*s*. 6*d*. ...	2	5	0			
Sowing manure at 3*d*. per cwt.		1	6			
Carting manure from rail to farm		1	0			
Carting manure from store to field		1	0			
Rent	1	10	0			
Rates and taxes		6	0			
2½ bush. maize for sowing at 16*s*.	2	0	0			
per acre ...	9	11	0			
				19	2	0
3 Acres Cabbage.						
Same cultivations as for maize (⅓ only)	16	7	9			
				16	7	9
Dung, manures, rent, rates and labour, same as above ...	7	11	0			
Plants and planting same ...	4	4	0			
per acre ...	11	15	0			
				35	5	0
2 Acres Trifolium.						
1 Ploughing at 25*s*.	1	5	0			
1 Cultivation at 4*s*. 6*d*. ...		4	6			
3 Harrows at 3*s*. 6*d*.		10	6			
3 Rollings at 2*s*. 6*d*.		7	6			
1 Harrowing (light) at 2*s*. ...		2	0			
per acre ...	2	9	6			
				4	19	0
Rent (half year)		15	0			
Manure, 6 cwt. at 7*s*. 6*d*. ...	2	5	0			
Sowing 6 cwt. manure at 3*d*. per cwt.		1	2			
Carting 6 cwt. manure		2	0			
Seed ¼ bush. at 75*s*.	1	17	6			
Rolling in spring at 2*s*. 6*d*. ...		2	6			
Rates (half year)		1	6			
	5	5	0			
				10	10	0
Carried forward				£130	14	3

Farm No. 84—*continued.*

	£ s. d.	£ s. d.
Brought forward		130 14 3
2 Acres Vetches.		
Cultivations same as for Trifolium (per acre)	2 9 6	4 19 0
Manures, &c., same as for Trifolium (per acre)	5 5 0	10 10 0
Carting all above, 90 days at 5*s.*		24 15 0
Cakes.		
May 1st to 15th—Cake fed 4lb. per head		
Aug. 1st to Sept 30th—Cake fed 2lb. per head		
Total 1¼ cwt. per cow for 46 cows=4 tons 4 cwts. at £18 per ton		75 12 0
Grazing.		
84 acres at £3 per acre (¼ rent only)	189 0 0	
Rates	9 9 0	
2 Rollings at 5*s.*	21 0 0	
2 Chain harrowings at 5*s.* ...	21 0 0	
Ditching and fencing	7 0 0	
Weeding (thistle cutting) at 1*s.*	4 4 0	
Making up gates and roads (chalk)	2 16 0	
Slagging 28 acres at 6 cwt. per acre, 8 tons 8 cwts. at £4 per ton	33 12 0	
Carting ditto	2 16 0	
Sowing ditto.	2 17 0	
56 acres aftermath at 7*s.* 6d. ...	21 0 0	
General expenses	5 0 0	
		319 14 0
Labour: 4 men for 22 weeks at 31*s.*		136 8 0
Depreciation.		
16 cows sold at £30 each (per year)	480 0 0	
3 cows total loss (per year)		
19 cows bought at £50 ...	950 0 0	
Total loss for 1 year	470 0 0	
Take 5/12ths of £470 for the period		195 10 0
General Expenses.		
Veterinary	10 0 0	
Whitewashing and fuel ...	11 15 0	
Fire insurance	1 15 0	
Depreciation on machinery ...	7 0 0	
Repairs on machinery	7 0 0	
Depreciation and extra expense on bull	10 0 0	
Proportion rent of buildings ...	8 10 0	
Proportion rates	1 10 0	
		57 10 0
Delivery.		
Keep of horse, shoeing, repairs to harness and cart		26 2 8
Interest on £2,750 at 5 per cent. for 5/12ths year		57 5 10
Management (including marketing expenses)		120 0 0
Expenses on cows bought and sold (rail, tolls, drovers) ...		25 0 0
		£1,184 0 9

Credit, 20 calves at £2 each = £40

Total milk produced, 11,760 gallons, 56 cows in dairy. Average value, £40 each.

Cost per gallon	2*s.*
Less manurial value ...	2*d.*
Net cost per gallon	1*s.* 10*d.*

Note.—The above is put forward as an example of intensive milk production on land which is not suitable for grazing.

FARM No. 85.

County, DORSET.

Size of Farm: 11 acres arable. 153 acres pasture.

System of Farming: Dairying.

MILK No. 16.

COST OF PRODUCTION.

During Summer—May to September, inclusive, 1918.

Average number of cows (including heifers) in herd during period, 42.

Average value of cows (including heifers) in herd during period, £65

	£ s. d.	£ s. d.
Foods.		
Mangels	20 0 0	
Cabbage	10 0 0	
Cake (undec. cotton), palm kernel meal	66 5 0	
Pasture and aftermath on 90 acres at 46*s.* 6*d.* per acre ...	209 5 0	
12 acres keep purchased to supplement own supply	95 10 0	
		401 0 0
Labour.		
2 men at 30*s.* each per week ...	66 0 0	
1 woman at 1*s.* 6*d.* per day ...	11 9 6	
1 boy at 15*s.* per week	16 10 0	
		93 19 6
Depreciation.		
Value of cows	2,730 0 0	
5 cows purchased	297 10 0	
5 cows sold	178 7 4	
Depreciation		119 2 8
General expenses.		
Rent of buildings	12 0 0	
Rates	9 1 5½	
Petrol, lubricating oil, and coal	6 12 6	
Veterinary and medicines ...	1 10 0	
Keep of bull	13 4 0	
Insurances	5 2 0	
Depreciation in machinery and utensils	3 4 0	
Repairs	17 6	
		51 11 5½
*Delivery		
153 days at 10*s.* per day (two journeys, in all 16 miles, 1¼ horses' labour required) ...		76 10 0
Interest on capital		50 0 0
Management		33 0 0
		825 13 7½
Less 10 calves at 48*s.* each		24 0 0
Net cost		£801 13 7½

*Same quantity of milk would have been fetched by factory's tractor for £57 17*s.* 11*d.* plus sending milk from yards to meet tractor on main road.

Total quantity of milk produced = 13,895 gallons; *i.e.*, 2 gallons 1¼ pints (21¾ lbs.) per cow per day.

(Milk is recorded by the Yeovil Recording Society).

Net cost per gallon, 1*s.* 2*d.*

Note.—The extra food, given generally during shortage of grass, was chaff (straw and hay), pulped mangel, of which I had a fair supply, palm kernel meal, a little bran when procurable. These carried me over fairly well till the grass came.

During Winter—October to April, 1918-19.

	£ s. d.	£ s. d.
Foods.		
Grazing, chiefly October ...	17 10 0	
Purchased cakes and meals ...	235 11 8	
Home-grown corn	70 0 0	
Hay (£8), cut straw (largely purchased) (£5)	514 0 0	
Swedes at 30*s.*, mangolds at 20*s.* per ton	250 0 0	
		1,087 1 8
Labour		145 15 1
Depreciation and loss on cows ...		96 0 0
Carried forward		1,328 16 9

Farm No. 85—*continued.*

	£	s.	d.	£	s.	d.
Brought forward				1,328	16	9
General expenses.						
Rent and rates on buildings ...	31	0	0			
Petrol, oils and coal	7	18	0			
Veterinary expenses	3	19	0			
Insurances	8	0	0			
Use of machinery and utensils...	7	15	0			
Repairs	5	17	3			
Keep of bull	16	10	4			
				80	19	7
Delivery				25	17	0
Interest on capital				70	0	0
Management				45	0	0
				£1,550	13	4
Less 22 calves				52	0	0
				£1,498	13	4

Total milk production = 10,927 gallons.

Average yield per cow per annum about 620 gallons

	s.	d.
Cost per gallon	2	9
Deduct manurial value		2½
Net cost per gallon	2	6½

NOTE.—During October to January about 45 lbs. swedes per head per day. February to April, about 60 lbs. mangels, 4 lbs. hay per day during October, 12 lbs. during November to April, 10 lbs. chaffed straw from November to April. Cake, chiefly cotton cake and palm nut cake, fed according to milk yield, 2 to 8 lbs. per head per day.

FARM No. 86.

County, GLOUCESTER.

Size of Farms: 150 acres arable. 365 acres pasture.

System of Farming: Cropping and dairying.

MILK No. 17.

STATEMENT OF THE COST OF MILK PRODUCTION

From May 1st to September 30th, 1918.

	£	s.	d.	£	s.	d.
Foods.						
Hay during part of May, August and September, say 10 lbs. per cow per day for 8 weeks, 13¾ tons at £5 5s.				72	3	9
Cabbage, 2 loads per day for 6 weeks (about 1 acre) ...				9	0	0
Artificial purchased foods, 4 lbs. per cow per day—May 1st to 7th, 13¾ cwts. at £15, plus cartage, say £15 10s. ton ...				10	13	2
Grazing: rent of 72 acres of pasture at 30s.	108	0	0			
Chain harrowing, twice, at 2s. ...	14	8	0			
Hedging and ditching, 25 chains at 6s.	7	10	0			
Part of repairs to gates, £4 10s., and fences, £5 10s.	10	0	0			
20 acres manured, 10 loads at 4s. (say half)	20	0	0			
15 acres slagged, 5 cwts. at 72s. (say half)	6	15	0			
Thistle cutting (say 6d. per acre)	1	16	0			
				168	9	0
Aftermath: the feed of 80 acres at 7s. 6d.				30	0	0
Labour.						
Cowman, 22 weeks at 37s., £40 14s.; under cowman at 30s. (say ¾ time), £24 15s. ...	65	9	0			
3 milkers (say half-time at 30s.), £49 10s.; 2 boys, half-time at 16s., £17 12s.	67	2	0			
1 dairyman, half-time at 30s., £16 10s.; milk-cart boy, half-time at 20s., £11	27	10	0			
				160	1	0
Carried forward				450	6	11

	£	s.	d.	£	s.	d.
Brought forward				450	6	11
Upkeep of herd.						
Replacing one-third of the herd by down calving heifers in exchange for grazers at a loss of £20 each, say £360, 5 months must carry five-twelfths of this	150	0	0			
Losses through illness, accident, abortion, £120 a year, five-twelfths	50	0	0			
				200	0	0
Part rent of building: estimated at five-twelfths of £20... ...				8	6	8
Rates				2	0	0
Keep of bull, 22 weeks at 10s. ...				11	0	0
Depreciation of refrigerator, stands, platforms, pumps, rubber tubes and pipes, buckets, stools, cow-ties, wheelbarrows, farm tools, ladders, white washing machinery				8	10	0
Repairs and renewals				9	10	0
Sundries.						
Fire insurance, £2 2s.; employers' liability, 5s. 3d. ...	7	5	0			
Medicines and veterinary's charge, say 5s. per week ...	5	10	0			
Soap and soda 15s., coal 34s. 9d., lime 7s. 6d.	2	17	3			
Disinfectant 7s. 6d., upkeep of roads 75s.	4	2	6			
Stamps, telegrams, stationery and market expenses, estimated at 12s. per week ...	13	4	0			
				32	18	9
Delivery.						
Maintenance of milk van £1, harness £2 10s.					10	0
Keep of horse at 15s. per week...				16	10	0
Depreciation of horse				7	10	0
				747	2	4
Credit.						
By calves sold 8 at £3	24	0	0			
Manurial value of cake	1	6	8			
				25	6	8
				£721	15	8

Total yield of milk, 10,636 gallons = 1·411 gallons per cow per day.

Average number of cows in milk, 47; dry, 8; total, 55.

Cost of milk per gallon, 1s. 4½d. Value of cows, £42.

Period—October 1st, 1918, to January 31st, 1919.

	£	s.	d.	£	s.	d.
Foods.						
Hay (say 20 lbs. of hay per cow per day, 20 × 123 × 55) = 60$\frac{5}{56}$ tons at £8				483	4	0
Cabbage, 2 loads per day for 28 days, about ¼ acre				6	0	0
Mangolds, 95 days at 20 lbs. per cow per day (say 95 × 20 × 55) = 46$\frac{13}{20}$ tons at 25s.				58	8	0
Artificials, 3 lbs. per day (3 × 123 × 55) = 9 tons 1 cwt. 0 qrs. 23 lbs. at £19 10s.				176	13	6
The feed of 130 acres at 5s. ...				32	10	6
Maintenance of fences at 5s. per week				4	7	6
Labour.						
Cowman, 17½ weeks at 39s.	34	2	6			
Under cowman ,, 36s.	31	10	0			
3 milkers, ½-time ,, 36s.	47	5	0			
2 boys ,, 24s.	21	0	0			
Dairyman ,, 36s.	15	15	0			
Milk cart boys ,, 33s.	14	0	0			
				163	12	6
Maintenance of value of herd.						
The replacing of one-third of the herd by down calving heifers in exchange for outgoing grazers, losing £20 each = £360 a year. Allow one-third of this amount for the 4 months				120	0	0
Losses through illness, accident, abortion, etc., at £120 a year. Allow one-third of this amount				40	0	0
Carried forward				1,084	16	0

Farm No. 86—*continued.*

	£ s. d.	£ s. d.
Brought forward		1,084 16 0
Rent of buildings, say one-third of £20		6 13 4
Rates. Apportioned at		1 17 6
Keep of bull. 17¼ weeks at 10*s.* ...		8 15 0
Depreciation of machinery. Depreciation of refrigerator, stand, staging, pumps, rubber tubes, buckets, stools, cow chains, wheel barrows, tools, ladders, white washing machinery, etc., etc.		8 7 6
Repairs and renewals, estimated at		8 12 6
Miscellaneous. Proportion of fire insurance, employers' liability, veterinary and medicines, soap, soda and coals for washing utensils, etc., lime and disinfectant, upkeep of roads and yards, stamps, stationery, telegrams and market expenses		30 0 0
Maintenance of milk van, harness, keep of horse, and including depreciation of horse		29 0 0
		£1,178 1 4
Credit.		
30 calves at 60*s.*	90 0 0	
Manurial value of cakes, ¼ of £176 3*s.* 6*d.*	44 0 10	
		134 0 10
		£1,044 0 6

Total yield of milk, 9,672 gallons = 1·42 gallons per cow per day.

Average number of cows in milk, 55; dry, 6; total, 61. Value, £40.

Average cost of milk, 2*s.* 2*d.* per gallon.

[Note.—A further deduction of 1*d.* per gallon should probably be made for manurial value of hay, &c. J.W.]

Period—February 1st to April 30th, 1919.

	£ s. d.	£ s. d.
Foods.		
Hay, 36 lbs. per day for 89 days (36 × 89 × 55) = 72⅛ tons at £8		629 4 0
Mangolds, 20 lbs. per cow per day for 89 days (20 × 89 × 55) = 43⅛ tons at 25*s.* ton ...		54 13 0
Artificials, 3 lbs. per cow per day for 89 days for 55 cows (× 89 × 55) = 6⅛ tons at £19 10*s.*		127 14 6
Labour. Calculated on the same basis as for the October to January period		127 10 0
Maintenance of value of herd. Calculated on the same basis as for the October to January period...		120 0 0
Rent of buildings. Calculated on the same basis as for the October to January period		5 0 0
Rates. Calculated on the same basis as for the October to January period		1 15 0
Keep of bull. Calculated on the same basis as for the October to January period		6 0 0
Depreciation of machinery. Calculated on the same basis as for the October to January period		5 17 6
Repairs and renewals. Calculated on the same basis as for the October to January period...		6 1 9
Miscellaneous. Calculated on the same basis as for the October to January period		27 10 0
Transport, upkeep. Calculated on the same basis as for the October to January period		26 0 0
		£1,137 5 9
Credit.		
10 calves at 60*s.*	30 0 0	
Manurial value of cakes, ¼ of £127 14*s.* 6*d.*	31 18 7	
		61 18 7
		£1,075 7 2

Total milk for 89 days, 8,446 gallons = 1·72 gallons per cow per day.

Average number of cows in milk, 55; dry, 6; total, 61. Value, £40.

Average cost per gallon, 2*s.* 6¼*d.*

[Note.—A further deduction of 1*d.* per gallon should probably be made for manurial value of hay, &c. J.W.]

FARM No. 87.

County, GLOUCESTER.

Size of farm: 52 acres arable—262 acres pasture.

System of Farming: Cropping and dairying.

MILK No. 18.

COST OF MILK PRODUCTION—1918–19.

First period—1st May, 1918 to 30th September, 1919.

	£ s. d.	£ s. d.
Foods.		
Grass, 109 acres, 30*s.* rent, 6*d.* rates	177 2 6	
Aftermath, 40 acres at 8*s.* ...	16 0 0	
5 acres vetches grown as regular crop for cows at cost—£15 per acre	75 0 0	
Cutting and hauling vetches, horse labour, £17 10*s.*, man labour, £8 15*s.*	26 5 0	
		294 7 6
Labour.		
Cowman, in attendance, delivers milk, &c	38 10 0	
5 milkers, 4 hours per day at 7*d.* per hour	89 5 0	
		127 15 0
Depreciation and Loss (*See* App. I.)*		139 1 3
General Expenses.		
Veterinary expenses	5 0 0	
Repairs	4 11 8	
Coal	2 4 0	
Miscellaneous	5 0 0	
Keep of bull	11 8 0	
		28 3 8
Delivery: Horse only, man included above		11 0 0
Interest on capital, 5 per cent. on £2,800 for 5 months		55 0 0
Management at 50*s.* per week ...		
Total ...		655 7 5
Less sale of 18 calves		66 19 0
Net cost ...		£588 8 5

Milk Produced. 14,089 gallons from 66 cows, 56 in milk.
Net cost per gallon 10·02*d.*

Second period—1st October, 1918 to 31st January, 1919

	£ s. d.	£ s. d.
Foods.		
Grazing, October, November, 97 acres at 10*s.*	53 7 0	
October 10 in-calf cows at 4*s.* per week each	8 0 0	
Cotton cake. 1¾ lbs., Dec., 2 lbs. Jan., 48⅛ cwts. at £14 10*s.* ...	42 2 10	
Linseed and cotton cake. 1½ lbs. Oct., Nov., 45¾ cwts. at £16 15*s.*	38 6 5	
Hay. 10 lbs. Oct.–Dec., 12 lbs. Jan., 11 lbs. Jan., in-calf cows, 26 tons 7 cwts. at £8 ...	210 16 0	
Oat straw. 14 lbs. Nov., 16½ lbs. Nov.–Jan., in-calf cows, 17 tons 8 cwts. at £1 10*s.* ...	26 2 0	
Wheat straw chaff. 14 lbs. Dec. Jan., 26 tons 14 cwts. at £2 ...	23 8 0	
Mangels. 18 lbs. Dec., 20 lbs. Jan., 29 tons 7 cwts. at 30*s.* ...	44 0 0	
Oatmeal. 3 lbs. Dec.–Jan., 46¼ cwts.	80 4 3	
		526 7 0
Labour.		
5 men at 35*s.* per week each ...		157 10 0
Depreciation and Loss (*See* App. I.)*		111 5 0
Carried forward		795 2 0

Farm No. 87—*continued.*

	£ s. d.	£ s. d.
Brought forward £		795 2 0
General Expenses.		
Veterinary expenses	6 10 0	
Repairs and depreciation ...	8 6 6	
Coal	2 2 0	
Petrol	6 6 0	
Lighting oil	1 16 0	
Rent and rates on buildings ...	6 13 4	
Keep of bull	18 0 0	
		49 13 10
Delivery: Horse only, man included above		13 10 0
Interest on capital, 5 per cent. on £2,800 for 4 months		46 13 4
Management at 50*s* per week ...		45 0 0
Total ...		949 19 2
Less sale of 23 calves		60 9 6
Net Cost ...		£889 9 8

Milk production. 9,717 gallons from 66 cows (56 in milk)

	s.	*d.*	
Cost per gallon ...	1	10	
Allow for manure ...		1½	(no charge for litter)
Net cost per gallon	1	7½	

Third period—1st February, 1919, to 30th April, 1919.

	£ s. d.	£ s. d.
Foods.		
Cotton cake. 5 tons 11¼ cwts. at £14 10*s*.	80 13 1½	
Oatmeal. 6 tons 13¼ cwts. at £17 8*s*. 4*d*.	116 5 1½	
Braz. Beans. 1 ton 5 cwts. at £16	20 0 0	
Hay. 26 tons 14 cwts. at £8 ...	213 12 0	
Wheat, straw and chaff. 30 tons 12 cwts. at £2	61 4 0	
Mangels. 44¼ tons at £2 ...	89 0 0	
		580 14 3
Labour. Same as second period ...		120 0 0
Depreciation and Loss (*See* App. I.)*		83 8 9
General Expenses.		
Veterinary expenses	5 0 0	
Repairs and shoeing	13 3 5	
Coal	1 13 0	
Petrol for chaffing, &c	4 17 6	
Petroleum for lighting	16 0	
Keep of bull	12 0 0	
		37 9 11
Delivery. Horse keep only ...		9 0 0
Interest on capital, 5 per cent on £2,800 for 3 months		35 0 0
Management at 50*s*. per week ...		30 0 0
Total ...		895 12 11
Less 13 calves		32 2 0
Total ...		£863 10 11

Milk production. 6,630 gallons from 66 cows (48 in milk).

	s.	*d.*	
Cost per gallon. ...	2	5½	
Deduct for manure ...		1½	(no charge for litter)
Net cost per gallon...	2	4	

*Appendix I.

	£ s. d.	£ s. d.
Depreciation and Loss on Cows.		
May, 1918, 66 cows		2,904 0 0
20 cows purchased for		760 0 0
		£3,664 0 0
1 cow died.		
20 cows sold for	600 5 0	
May, 1919—65 cows	2,730 0 0	
		3,330 5 0
		£333 15 0

i.e. £27 16*s*. 3*d*. per month.

FARM No. 88.

County, LANCASHIRE.

MILK No. 19.

COST OF MILK PRODUCTION FOR 1918.

Size of Farm: Pasture 194½ acres. Arable 42½ acres. Average number of Cows, 60.

EXPENDITURE.	£ s. d.	RECEIPTS.	£ s. d.
Rent	399 0 0	Sale of cows	365 10 0
Rates	66 4 9½	Calves ...	95 15 0
Taxes	34 17 2	Butter ...	78 0 0
Insurance ...	9 19 7	Eggs ...	96 0 0
Wages paid ...	650 15 0	Pigs ...	174 0 0
Purchased foods ...	1,548 2 1	Potatoes ...	315 0 0
Manures ...	128 18 6		
Seeds	100 13 0		
Live stock ...	381 10 0		
Self minder ...	60 0 0		
Cambridge rollers	17 0 0		
Disc harrow ...	11 11 0		
Tradesmen's bills	37 14 4		
Depreciation on horses 10 per cent.	70 0 0		
Depreciation on Implements ...	40 0 0		
Depreciation on plant 5 per cent.	30 0 0		
Vet.: medicine & expenses ...	10 0 0		
Cost of conveying milk	104 0 0		
Interest on capital	200 0 0		
Management ...	200 0 0		
	£4,100 5 5½		£1,124 5 0

Milk in gallons, 32,665.

Stock increased—2 horses cost £73 10*s*. 0*d*.

Summary.	£ s. d.	£ s. d.
Total expenditure		4,100 5 5½
Less Receipts other than for milk	1,124 5 0	
Increase in horses and implements	136 0 0	
		1,260 5 0
32,665 gallons milk cost		£2,840 0 5½

Cost per gallon=1*s*. 8·86*d*.

NOTE.—In the above statement, the milk is credited with the profit or debited with the loss, as the case may be, on produce other than milk. J.W.

FARM No. 89.

County, WARWICK.

Size of Farm: 68 acres arable, 186 pasture.

Soil: Heavy, "four-horse" land.

System of Farming: Cropping and dairying.

Rotations: (1) Fallow, beans, wheat.
(2) Fallow, beans, oats, seeds,—where land clean enough after beans. Beans dunged.

Number of work-horses: 6. About 3 miles from Station.

WHEAT No. 44.

Previous Crop: Bare fallow.

AVERAGE COST PER ACRE OF 1918 CROP.

Horse labour at 6*s*. per day. Horseman 34*s*. 6*d*. per week (30*s*. cash, 2*s*. house, 1*s*. potatoes, 1*s*. 6*d*. milk) say 5*s*. 9*d*. per day.

	£ s. d.	£ s. d.
Rent		17 6
Rates		2 0
Manure.		
1 cwt. sulp./amm. at 18*s*. applied; 2 cwt. supers. at 7*s*. applied		1 12 0
Seed.		
3 bush. purchased seed at 10*s*.		1 10 0
Carried forward £		£4 1 6

Farm No. 89—*continued.*

	£ s. d.	£ s. d.
Brought forward £		4 1 6
Cultivations.		
Ploughing, 1 man and boy, 3 horses, 1 acre per day ...	1 18 4	
Drilling, 1 man and boy, two horses, 2 acres per day (3-furrow drill)	11 4	
2 harrowings, 1 man; 2 horses, 6 acres per day	6 0	
Drawing water furrows, digging to drains, hedging and ditching	10 0	
2 harrowings in spring	5 0	
2 rollings in spring, man, 3 horses, 8 acres per day ...	6 0	
Hoeing 12*s*., and weeding 2*s*. 6*d*.	14 6	
		4 11 2
Harvesting.		
Opening round, 1*s*. 6*d*., twine 4*s*.	5 6	
Cutting, 2 men and 4 horses, 6 acres per day	6 0	
Stooking 3*s*.	3 0	
Carting and stacking, and thatching	14 0	
		1 8 6
Threshing including coals and twine for tying straw		1 3 6
Carting to Station or mill, 3-4 miles		6 6
Use om machinery and implements		9 0
Proportion cost of bare fallow, one-half ...		3 10 0
General expenses		4 0
Interest on capital		12 0
Management		17 6
Total Cost ...		£17 3 8

Average crop, 24 bush. grain in 1918.
1 ton straw ,, ,,

NOTE.—In this case the crop was much below the average for wheat after bare fallow. With the treatment given a crop of not less than 4 qrs. is expected and more is often obtained.

MILK No. 20.

COST OF MILK PRODUCTION, 1918–19.

First Period, 1st May, 1918, to 30th September, 1918.

Foods.	£ s. d.	£ s. d.
40 acres grass at £2 per acre inclusive	80 0 0	
14 acres aftermath at 15*s*. per acre inclusive	10 10 0	
5 tons cotton cake at £15 5*s*....	76 5 0	
1 ton linseed cake at £19 10*s*....	19 10 0	
		186 5 0
Labour, 1 man and girl about half-time		33 0 0
Depreciation and loss on cows ...		50 0 0
Carried forward £		£269 5 0

	£ s. d.	£ s. d.
Brought forward £		£269 5 0
General expenses.		
Rent, rates and repairs on buildings	2 10 0	
Upkeep of machinery and utensils	5 0 0	
Coals and oil, inc. petrol for engine	3 5 0	
General expenses	5 0 0	
Veterinary expenses	4 0 0	
		19 15 0
Delivery twice per day, 3 miles, 6*s*. per day...		46 4 0
Interest on capital, 5 per cent. on £1,000...		21 0 0
Management at 30*s*. per week		33 0 0
		£389 4 0
Deduct 9 calves at 45*s*. ...		20 5 0
		£368 10 0

Total milk produced, 4,778 gallons.
Net cost per gallon, 1*s*. 6¼*d*.

Second Period, 1st October, 1918, to 30th April, 1919.

Average daily ration per head during second period was:
20 lbs. mangolds.
13 ,, fodder.
4 ,, cakes and meals given chiefly to milking cows.

Foods.	£ s. d.	£ s. d.
14 acres aftermath at 5*s*. ...	3 10 0	
70 tons mangolds at 25*s*. ...	87 10 0	
22 ,, hay at £8	176 0 0	
22 ,, straw at 30*s*.	33 0 0	
4 ,, oats at £17	68 0 0	
10 ,, cakes and meals at £17 10*s*.	175 0 0	
		543 0 0
Labour, 1 man full-time and girl part-time		57 11 6
Depreciation and loss		30 0 0
General expenses.		
Rent and rates on buildings...	3 10 0	
Machinery and utensils ...	5 10 0	
Coals and oil	5 0 0	
General expenses...	5 0 0	
Veterinary expenses	3 0 0	
		22 0 0
Delivery once daily at 3*s*. per day		31 10 0
Interest on capital, 5 per cent. on £1,000		29 0 0
Management at 20*s*. per week ...		30 0 0
		£743 1 6
Credit.		
12 calves at 45*s*.	27 0 0	
120 tons dung at 10*s*.	60 0 0	
		87 0 0
Total Cost ...		£656 1 6

Total milk produced, 4,030 gallons.
Cost per gallon, 3*s*. 3*d*.

NOTES.—About 36 to 40 cows kept in herd. Herd maintained chiefly by breeding.

PART D.

Note on the Credit to be made for Manure in Milk Production.

In costing milk it is necessary to give the cows credit for the value of the manure which they produce. So far as the summer period—May to September—is concerned the greater part of the manure is either dropped on the grass land or by the wayside and very little goes into the dung heap. Hence if no charge be made against the grass no credit need be given to cows for that part of the manure which goes directly to the grass. As regards what goes into the dung heap, it is calculated that the credit would not exceed about ¼*d.* per gallon on the average.

As to the winter period—October to April—two methods may be followed, viz., (1) the quantity of dung produced may be estimated and valued at the price prevailing in the district, or (2) the value of the manure may be calculated on Hall and Voelcker's Table of Manurial Values.

Where all home grown foods are charged at farm market value, the first method is necessary in order to give a fair result. In this investigation, straw and roots have been charged at their "farm value," hay and oats at their market value.

Records are available of the total quantities of foods consumed by dairy stock, of the quantity of dung produced and of the milk yield on a number of farms during the period 6th October, 1918, to 18th May, 1919. These are summarised below :—

TABLE SHOWING MANURIAL VALUES of (*a*) Home Grown, (*b*) Purchased Foods from 10 farms during the period 6th October, 1918, to 1st February, 1919, and from 8 farms during the period 2nd February, 1919, to 18th May, 1919.

(*a*) HOME GROWN.

Food.	Manurial Value per ton.	October to February. Quantity.	October to February. Manurial Value.	February to May. Quantity.	February to May. Manurial Value.
	s. d.	Tons cwts.	£ *s. d.*	Tons cwts.	£ *s. d.*
Rye grass and meadow hay	17 0	140 0	119 0 0	138 11	117 14 0
Oat straw	7 6	157 10	59 1 3	126 12	47 9 0
Wheat straw	6 0	2 10	15 0	—	—
Oats	18 0	22 0	19 16 0	21 1	18 19 0
Oats and wheat...	17 6	2 0	1 15 0	—	—
Swedes and turnips	2 6	686 0	85 15 0	365 7	45 13 0
Potatoes	3 0	25 10	3 16 6	26 15½	4 19 0
			£289 18 9		£234 14 0

(*b*) PURCHASED FOODS.

	s. d.	Tons cwts.	£ *s. d.*	Tons cwts.	£ *s. d.*
Cotton cake, mixed	37 0	4 0	7 8 0	1 10	2 15 0
Linseed cake	44 0	3 0	6 12 0	17 1½	37 11 0
Linseed and cotton cake mixed	40 0	10	1 0 0	—	—
Palm kernel cake	23 0	10	11 6	18¾	1 1 0
Dairy cake and meal	30 0	3 0	4 10 0	3 0	4 10 0
Bean meal	36 0	42 15	76 19 0	43 10½	78 7 0
Bean meal and Indian meal	24 0	—	—	3½	4 0
Miller's offals	31 0	16 10	25 11 6	26 3¾	40 12 0
Dried grains	29 0	15	1 1 9	1 3½	1 14 0
Len il offals	36 0	1 10	2 14 0	1 14	3 1 0
Malt cummins	40 0	2 0	4 0 0	9	18 0
Rus meal	40 0	5 10	11 0 0	6 10	13 0 0
Rye flour	30 0	10	15 0	—	—
Pea offals	36 0	—	—	2 10	4 10 0
Locus bean meal	13 0	—	—	1 0	13 0
Wet grains	7 0	147 0	51 9 0	102 17	36 1 0
Treacle	—	—	—	4 14¾	—
Carnosin	—	—	—	10	—
			£193 11 9		£224 17 0

	Oct. to Feb.	Feb. to May.
Total milk produced	63,898 gals.	59,279 gals.
Manurial value per gallon { (*a*) home grown ...	1·09*d.*	0·95*d.*
Manurial value per gallon { (*b*) purchased ...	0·73*d.*	0·91*d.*
Total	1·82*d.*	1·86*d.*
On basis of dung Valuation. { £ *s. d.* 1,236 tons @ 802 12 0	3·01*d.*	—
On basis of dung Valuation. { 1,120 tons @ 747 0 0	—	3·04*d.*
Difference ...	1·19*d.*	1·18*d.*

In this case all home grown foods were charged at farm market value.

NOTE.—The figures for manurial values given above were drawn up in 1914, but the increase in current manurial values per ton is offset by the fact that the foods were entirely consumed by dairy stock and the manure stored in open heaps—as is the custom on dairy farms—subject to an average wastage of at least 30 per cent. Hall and Voelcker point out that "our tables are based on the assumption that the manure is made in stalls or yards which do not admit of loss by drainage and has been kept with all reasonable care, protected from washing with rain, or loss from undue or prolonged exposure." They further state that where the manure has undergone deterioration through inferior management a deduction not exceeding 50 per cent. of the figures given may be made on this account.

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ROYAL COMMISSION

ON

AGRICULTURE.

MINUTES OF EVIDENCE

(16th September, 1919, to 24th September, 1919).

VOLUME III.

Presented to Parliament by Command of His Majesty.

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PRINTED AND PUBLISHED BY
HIS MAJESTY'S STATIONERY OFFICE.

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